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NAVAL POSTGRADUATE SCHOOL

MONTEREY, CALIFORNIA

THESIS

**BUILDING LINE OFFICERS INTO FINANCIAL
MANAGERS: AN ANALYSIS OF THE PROCESS AND
RECOMMENDATIONS FOR IMPROVEMENT**

by

David C. Cutter

June 2004

Thesis Advisor:
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REPORT DOCUMENTATION PAGE			<i>Form Approved OMB No. 0704-0188</i>	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington DC 20503.				
1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE June 2004	3. REPORT TYPE AND DATES COVERED Master's Thesis	
4. TITLE AND SUBTITLE: Building Line Officers Into Financial Managers: An Analysis of the Process and Recommendations for Improvement			5. FUNDING NUMBERS	
6. AUTHOR(S) David C. Cutter				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Postgraduate School Monterey, CA 93943-5000			8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING /MONITORING AGENCY NAME(S) AND ADDRESS(ES) N/A			10. SPONSORING/MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government.				
12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.			12b. DISTRIBUTION CODE	
13. ABSTRACT (maximum 200 words) With a FY 2004 budget of \$114 billion, there is no question that the Department of the Navy is involved in big business. If compared to the sales revenues of the Fortune 500, the Navy would rank sixth. After having weathered a prolonged drawdown through the 1990's, Naval leadership must recapitalize its aging legacy systems. The plan to accomplish this task is the Sea Enterprise component of the Navy's Sea Power 21 strategy. In order to reach these goals, the Chief of Naval Operations needs a cadre of business-savvy line officers who can properly allocate scarce resources. The core of this group is comprised of line officers who hold the Financial Management (FM) subspecialty designator. This thesis applies a managerial control system approach to the process of filling Financial Management billets with properly qualified FM line officers. Complex and multifaceted, the process contains three distinct components: promotion, assignment and education. After examining levers of control that can be accessed by the FM community manager, this thesis identifies system weaknesses. Recommendations to solve the weaknesses include improved control and tailored incentives. The combination of control and incentives could improve the qualification rate of the Navy's FM officer positions and, ultimately, allow the Navy to meet its Sea Enterprise goals.				
14. SUBJECT TERMS Financial Management, Navy Officer Career Paths, FM Community Manager			15. NUMBER OF PAGES 93	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT UL	

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**BUILDING LINE OFFICERS INTO FINANCIAL MANAGERS:
AN ANALYSIS OF THE PROCESS AND RECOMMENDATIONS FOR
IMPROVEMENT**

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Submitted in partial fulfillment of the
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MASTER OF BUSINESS ADMINISTRATION

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ABSTRACT

With a FY 2004 budget of \$114 billion, there is no question that the Department of the Navy is involved in big business. If compared to the sales revenues of the Fortune 500, the Navy would rank sixth. After having weathered a prolonged drawdown through the 1990's, Naval leadership must recapitalize its aging legacy systems. The plan to accomplish this task is the Sea Enterprise component of the Navy's Sea Power 21 strategy. In order to reach these goals, the Chief of Naval Operations needs a cadre of business-savvy line officers who can properly allocate scarce resources. The core of this group is comprised of line officers who hold the Financial Management (FM) subspecialty designator. This thesis applies a managerial control system approach to the process of filling Financial Management billets with properly qualified FM line officers. Complex and multifaceted, the process contains three distinct components: promotion, assignment and education. After examining levers of control that can be accessed by the FM community manager, this thesis identifies system weaknesses. Recommendations to solve the weaknesses include improved control and tailored incentives. The combination of control and incentives could improve the qualification rate of the Navy's FM officer positions and, ultimately, allow the Navy to meet its Sea Enterprise goals.

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ACKNOWLEDGEMENTS

The author would like to recognize Captain John Mutty and Dr. Jerry McCaffery who generously provided support and guidance in the completion of this thesis. Combined with Vice Admiral Tom Hughes' intimate knowledge of the Navy Financial Management (FM) community, their assistance was invaluable.

Additionally, the insights provided on control system strengths and limitations by Dr. Mary Malina and Dr. Juliette Webb were instrumental in the process analysis. After reading early drafts of this thesis, they provided focused feedback on the complexities of the studied process. Process and procedural data provided by the Navy Personnel Command was critical to the analysis. In particular, the author would like to thank Ms. Holly Bullard (PERS-440E) and Lieutenant Nicole DeRamus (OPNAV N-131) for information provided on the Navy subspecialty program.

Finally, the author would like to acknowledge the assistance of Commander Brian Luther, Office of Financial Management and Budget (FMB). His insight into the FM community as a whole was critical to the success of this project.

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I. BACKGROUND AND INTRODUCTION

A. BACKGROUND

1. United States Navy FY 2004 Budget

For fiscal year (FY) 2004, the United States Navy's budget totaled over \$123 billion. Viewed as a service organization, the Navy provides power projection and homeland defense for the nation. The Navy's income stream originates from tax revenues and the issuance of public debt and is managed by the leadership of the Department of Defense and the Department of the Navy. Purchasing weapon systems, operating those systems and paying the people required to run and maintain them are the three largest expense categories for the Department.

There is no question that the Navy is involved in big business. The magnitude of operations conducted by the Department of the Navy is illustrated by comparison to Fortune magazine's 2003 Fortune 500 rankings. The top ten corporations and their revenue values are shown in Table (1).

Rank	Corporation	2003 Sales Revenue (\$B)
1	Wal-Mart Stores Inc.	\$258.68
2	Exxon Mobil Corp.	\$213.20
3	General Motors Corp.	\$195.65
4	Ford Motor Co.	\$164.50
5	General Electric Co.	\$134.19
6	ChevronTexaco Corp.	\$112.94
7	ConocoPhillips	\$99.47
8	Citigroup Inc.	\$94.71
9	International Business Machines Corp.	\$89.13
10	American International Group	\$81.30

Table 1. Fortune Magazine's "FORTUNE 500" Ranking for 2003 [After Ref. 1]

If the Department of the Navy were a corporation, it would rank sixth in Fortune magazine's ranking. While a direct comparison is not entirely accurate, it illustrates the enormity of the Department's financial management operations. The fundamental difference between the corporations in Table (1) and the United States Navy is that the

leadership of a corporation strives to maximize profit. As a government entity, the Navy operates to utilize the income stream provided by Congress to maximize defense utility for the nation's citizens irrespective of profit or loss. Defense of a nation is much more difficult to quantify than a corporation's quarterly profit figures. Additionally, the organization's leaders may never know if they allocated resources properly until the platforms and people are utilized in a time of war.

2. Fiscal Leadership of the United States Navy

This challenging task of fiscal leadership is given to the Department's Chief Executive Officer (CEO), the Secretary of the Navy (SECNAV). Viewed as a corporation, the Department of the Navy has two main subsidiaries, the United States Navy (USN) and the United States Marine Corps (USMC). Despite having two distinct subsidiaries, the Department has only one Chief Financial Officer (CFO). The Department's CFO is the Assistant Secretary of the Navy (Financial Management and Comptroller) or ASN (FM&C). Controlling the management of financial operations within the Department of the Navy, the Secretary has a unique responsibility as outlined in Title 10, United States Code.

The Office of the Secretary of the Navy shall have sole responsibility ... for the following functions: (A) Acquisition. (B) Auditing. (C) Comptroller (including financial management). (D) Information management...**No office or other entity** may be established or designated within the Office of the Chief of Naval Operations ... to conduct any of the functions specified in paragraph (1). [Ref. 2]

The uniqueness of this responsibility is highlighted above. Most functional responsibilities in the Navy have many stakeholders; however for Financial Management (FM), the Secretary's office is the sole controlling agency. Per United States Code Title 10, the Secretary has delegated this authority to ASN (FM&C).

3. Fiscal Responsibilities of ASN (FM&C)

ASN (FM&C) is charged with allocating a finite amount of resources to the platforms and people required to meet the Navy's contribution to the President's National Security Strategy. Congress in United States Code Title 10 defines these duties.

(a) The Secretary of the Navy shall provide that the Assistant Secretary of the Navy for Financial Management shall direct and manage financial management activities and operations of the Department of the Navy, including ensuring that financial management systems of the Department of the Navy comply with subsection (b). The authority of the Assistant Secretary for such direction and management shall include the authority to

—

(1) supervise and direct the **preparation of budget estimates** of the Department of the Navy and otherwise carry out, with respect to the Department of the Navy, the functions specified for the Under Secretary of Defense (Comptroller) in section 135(c) of this title;

(2) approve and supervise any project to **design or enhance a financial management system** for the Department of the Navy; and

(3) approve the establishment and supervise the operation of any asset management system of the Department of the Navy, including —

(A) systems for **cash management, credit management, and debt collection**; and

(B) systems for the accounting for the quantity, location, and cost of property and inventory.

(b)(1) Financial management systems of the Department of the Navy (including **accounting systems, internal control systems, and financial reporting systems**) shall be established and maintained in conformance with - (A) the accounting and financial reporting principles, standards, and requirements established by the Comptroller General under section 3511 of title 31; and (B) the internal control standards established by the Comptroller General under section 3512 of title 31.

(2) Such systems shall provide for —

(A) complete, reliable, consistent, and timely information which is prepared on a uniform basis and which is **responsive to the financial information needs of department management**;

(B) the development and reporting of **cost information**;

(C) the integration of **accounting and budgeting information**; and

(D) the **systematic measurement of performance**.

(c) The Assistant Secretary **shall maintain a five-year plan** describing the activities the Department of the Navy proposes to conduct over the next five fiscal years to improve financial management. Such plan shall be

revised annually. (d) The Assistant Secretary of the Navy for Financial Management shall transmit to the Secretary of the Navy a report each year on the activities of the Assistant Secretary during the preceding year. Each such report shall include a description and analysis of the status of Department of the Navy financial management. [Ref. 3]

The development of a five-year strategic financial plan combined with costing, budgeting, cash management, and internal control are all core business functions. As defined by law, ASN (FM&C) is tasked with all aspects of the financial business of the Navy. ASN (FM&C) has a mixture of civilian Navy employees and military officers on his staff. Like many defense staffs, civilian employees provide the long-term corporate knowledge of the organization. The military officers who bring their recent operational experience to the decision-making processes within the Pentagon help to provide a reality check to fiscal decisions.

The senior military officer in the office of ASN (FM&C) is a Rear Admiral who holds the title of Director, Office of Budget. To execute his budgetary responsibilities properly, this officer is dependent on the Navy's ability to develop and place qualified military officers within the Navy's Financial Management (FM) infrastructure. In addition to proven operational experience, these officers must also have significant experience and education in business and financial management processes. Intertwined with budgetary responsibilities, FMB is not only responsible for, but also very dependent on the placement of qualified employees within the Navy's FM infrastructure.

B. OBJECTIVE

The purpose of this thesis was to analyze the systems and processes that were currently in place to educate, train and prepare unrestricted line officers for critical financial management positions within the United States Navy. These systems' interactions were explored, and upon completion of the analysis, an examination of the existing system's fit to the strategic goals of the Navy was undertaken. Finally, recommendations were made to increase the effectiveness of the process and improve its alignment to the strategic goals of the organization.

C. RESEARCH QUESTIONS

1. Primary Research Question

- What is the existing management/internal control system utilized to produce a senior unrestricted line officer with Financial Management training and experience?

2. Secondary Research Questions

- What are the system's strengths and weaknesses?
- What is the strategic manpower goal of the FM community?
- How can the system be improved to align with the desired strategic goal?

D. SCOPE AND LIMITATIONS

1. Unrestricted Line (URL) Officers

This thesis examined the Navy's processes that were used to prepare unrestricted line officers for critical positions within its financial management operations. Its focus was macroscopic and global view. Analysis of the job structure and population of the Financial Management community was restricted to the approximately 50 jobs specifically designated to require officers with both operational experience (URL community) and business savvy.

Within the URL community, analysis was further narrowed to those officers from the Surface Warfare, Submarine and Aviation communities. This focus was chosen because these three communities comprise 95% of the URL community. Moreover, only officers from these three communities have risen to the highest level of enterprise management within the Navy, the position of Chief of Naval Operations.

This focus was necessary to concentrate on the creation of a cadre of senior Naval Officers who are not only operationally successful, but also have attained the education and experience necessary to properly allocate resources in a fiscally constrained environment. The process to create these officers is complex and

challenging. Once this level of proficiency is attained, Naval officers with these skill sets are highly coveted within the organization, and also aggressively recruited by other government organizations and the private sector.

2. Existing Processes

Recommendations for improvement are limited to existing processes within the Navy manpower system. Recommending improvements that ignore fiscal and organizational restraints has little utility for Navy leadership. Working within the established structure to recommend managerial improvements is more difficult, but has the greatest opportunity for actual implementation.

3. Perspective

Finally, analysis and recommendations for improvement are tailored toward the audience of the Navy's Budget Officer, commonly referred to as FMB (Financial Management and Budget), and his staff. With any complex system there are many stakeholders. To clarify the process, this analysis will be oriented toward the perspective of a single stakeholder. This will provide potential improvements that support the accomplishment of FMB's duties as described in the preceding introduction.

E. METHODOLOGY

The three major control systems that were analyzed in this thesis include the following:

1. Financial Management Billet Structure

To provide a historical perspective, the 2004 FM billet structure was compared to the structure that existed in 1992. The historical comparison date was chosen due to data availability from a previous study. During the 1990's, the size of the United States military was reduced significantly. By providing an early data point, this comparison

documents long-range changes in the FM community job structure. Additionally, a 2001 revision to the Navy's subspecialty tracking system and its applicability to the FM community will be investigated.

2. Financial Management Education and Assignment Process

A managerial control system methodology was utilized to evaluate the effectiveness of existing controls to meet the strategic objective. Because the implementation of control is highly dependent on the people who are involved in the process, interviews were conducted to confirm existing controls and to investigate their actual level of implementation.

3. Military Promotion Process

The promotion of military officers is highly regulated by limitations set in United States Code Title 10. These constraints and the process used to select officers for the next higher rank will be analyzed to evaluate interaction with the Financial Management community.

F. MANPOWER DATA SOURCE

The Naval Personnel Command extracted the raw manpower data used for analysis in this thesis on April 1, 2004. Unless otherwise indicated, all statistics, tables and charts that depict officer end-strength levels, FM qualification or FM billet characteristics are from this source and as of this date. Data were extracted from the Officer Personnel Information System (OPINS).

G. ORGANIZATION

Following this introduction, Chapter II reviews previous research that applies to the Navy Financial Management community. Chapter III describes the structure and processes that affect the development of Unrestricted Line Financial Managers. Chapter

IV defines the role of business and financial management education in the Navy's overall strategy. Analysis of the applicable control systems and their fit to the strategic goal are presented in Chapter V. Chapter VI concludes with specific recommendations to both alter the control of and increase the incentives for the Navy's Unrestricted Line Financial Management community. Ultimately, these changes will improve the alignment of the organization toward its strategic goals.

II. LITERATURE REVIEW

The scope and structure of the FM community has been the object of intense scrutiny over the last decade. From an internal point of view, multiple theses have been written at the Naval Postgraduate School that evaluated individual components of the system. Externally, the General Accounting Office (GAO) has conducted at least two analyses of the Navy's Financial Management community. Other organizations such as the Center for Naval Analyses (CNA) and the RAND Corporation have conducted broader looks at officer promotion, education and retention. This chapter summarizes the studies completed that pertain to the Navy FM job structure, concentrating on URL officers. Other literature that analyzes promotion, education and retention is referred to throughout the thesis.

A. UTILIZATION OF RESOURCES

1. Blaisdell Thesis

In 1996, LT Steven H. Blaisdell conducted an analysis to determine whether or not NPS Financial Management graduates were eventually placed into FM jobs. The study group was 195 FM students who graduated from 1981 to 1985. Blaisdell examined the number of officers who were ultimately assigned to an FM position sometime within the eleven to fifteen year period covered by the study. Referred to as the "utilization rate" by the Navy, the process of filling a subspecialty tour or "payback tour" implies that the student owes the Navy an obligation for his education. The "payback tour" is necessary for the Navy to comply with DoD education directives. [Ref. 4] Written during the military drawdown of the 1990's, the thesis takes on a tone that scarce resources should be more tightly controlled and those officers who received an education should be expected to provide a return on the Navy's investment.

Blaisdell's research questions covered one aspect of the control system analysis of this thesis, specifically, whether officers who receive an FM education were ever assigned to a position that requires the education. Analyzing the Navy's semi-annual report on subspecialty utilization, he identified one of the control elements of the system.

After analyzing the data, Blaisdell determined that significantly different utilization rates occurred between Staff and URL officers. Their utilization rates were 92 percent and 66 percent respectively. To explain this differential, Blaisdell noted the difference between the career paths of Staff and URL officers and stated “a subspecialty designation for a staff Corps officer is analogous to a warfare specialty for an URL officer.” [Ref. 4] This assertion is a critical component of the difficulty that the Navy experiences when trying to build URL officers into Financial Managers. Primarily aviators, ship’s company officers and submariners, the career path of a line officer includes at least four sea tours. Between these sea duty tours, there exists limited opportunities for line officers to gain FM education and experience. A detailed analysis of these limitations is presented in Chapters III and IV. The thesis concluded that although the rate did not meet the CNO’s existing goal of 100 percent, utilization was relatively effective for the sample population.

2. Borkowski Thesis

Conducting a 1994 cost-benefit analysis of the NPS FM curriculum, LT Paul E. Borkowski also identified the qualitative aspects of a defense-oriented financial management program. His conclusion, after comparing costs between NPS and other similar Masters programs, was that “NPS was, in every case, the low cost alternative.” [Ref. 5] This conclusion is significant when analyzing the control system. If other universities offered a lower cost alternative, Navy leadership could decide to close NPS and shift FM education to civilian MBA programs. If such a decision were implemented, the FM community would lose the qualitative aspects identified by Borkowski.

Qualitatively, the combination of a military atmosphere, defense related research and a thesis requirement contributed significantly to the benefit side of his analysis. The author correctly identifies some of the critical qualitative components of the NPS program that would be lost if the program was shifted elsewhere, however the most significant benefit that was omitted by the Borkowski thesis was student exposure to the federal budgeting process, public policy determination and their applicability to the defense environment. An MBA that is focused on non-governmental business processes would be valuable, but less so than the current mix of the NPS FM curriculum.

B. FINANCIAL MANAGEMENT EDUCATION

1. GAO Report 97-58

In response to a 1997 query by Senator Tom Harkin, the GAO conducted an analysis of the education and professional experience levels of 100 officers filling Navy comptroller billets. Categorizing the officers by line and staff corps, the following statistics were calculated for the 53 URL officers.

They filled mostly senior-level comptroller positions—14 were captains and 25 were commanders. They averaged 17.8 years of commissioned service in the Navy, but only 3.4 years in financial management jobs, including their tenure in their current comptroller position. Only 19 of the 53 (36 percent) majored in accounting or other business-related curriculum as undergraduate students. Thirty-two of the 53 officers (60 percent) obtained masters degrees in a business-related major, but 14 of the remaining 21 officers (26 percent) lacked either undergraduate or graduate education in any business-related field. [Ref. 6]

Referring to \$225B of errors in FY94 financial reports, the report connected these substantial misstatements to the lack of education and experience of the Navy's FM officers and concluded that:

The Navy's personnel practices do not provide a career path for Navy officers to develop and maintain the core competencies needed by a comptroller. By contrast, the Air Force and the Army offer a career path in comptrollership. Because of the Navy's approach, many officers in key comptroller positions lack the financial management experience and the accounting education needed to meet the demands of today's financial management environment. [Ref. 6]

2. GAO Report 98-86

In 1998, the GAO conducted an internal audit of the Navy's Financial Managers. The report was one of four planned profiles of FM personnel in the DoD, the United States Air Force (USAF), the United States Army (USA) and United States Navy (USN). Delivered to ASN (FM&C), the report summarized the data collected from Financial Managers who responded to a GAO draft survey. Of the 306 key FM positions identified by Navy leadership, 198 of those contacted returned a survey. The survey

collected information on education, FM experience, professional certifications such as Certified Public Accountant (CPA) and ongoing professional training. [Ref. 7]

Grouped by activity type, the report summarized respondents from ASN (FM&C), Atlantic and Pacific Fleet Commanders, the Chief of Naval Education and Training (CNET), Navy Working Capital Fund (NWCF) organizations,¹ Navy Systems commands² and the United States Marine Corps (USMC). Averaging 21 years of professional work experience, 44 military officers responded to the survey. Of the military officers surveyed, 57 percent reported a business undergraduate degree and 85 percent reported a business Masters degree. Officers holding professional certifications included one CPA, three Certified Government Financial Managers (CGFM), and three Certified Managerial Accountants (CMA). [Ref. 7]

Although GAO made no qualitative conclusions in the report, the Navy responded that the report weighed accounting training and experience too heavily. Additionally, the Navy noted its policy of using continuing education as a more useful measurement of education than professional certifications. [Ref. 7]

3. Palmer Thesis

LT Richard T. Palmer's thesis analyzed the skill sets required to perform effectively in financial management positions. Conducted in 1992, his analysis recorded the structure and composition of the FM billet listing in exacting detail. This study was used as a historical comparison point for analyzing the current FM billet structure in this thesis.

His thesis concluded that the Naval Postgraduate School's FM curriculum "provides adequate coverage of the requirements" necessary to operate effectively as a financial manager. [Ref. 8] The establishment of Educational Skill Requirements (ESR) that are reviewed by the curriculum sponsor is a critical feedback communication path in the control system. For the Financial Management curriculum, the sponsor is FMB who conducts his review on a periodic basis.

¹ Examples of NWCF organizations are shipyards, aviation repair depots and supply centers.

² Naval Sea Systems Command and Naval Air Systems Command.

4. Jackson Thesis

LT Roger P. Jackson's research compared the FM program at NPS with other similar graduate programs in the United States. In 1992, the FM program was awarding a Masters of Science in Management (MSM) degree instead of the Masters of Business Administration (MBA) that is currently conferred upon graduates. Comparing the NPS MSM with leading MBA and Masters of Public Administration (MPA) programs, he concluded that the NPS MSM was the most comprehensive of the alternatives. More importantly, he determined that the NPS MSM was an optimal hybrid of the MBA and the MPA. Providing the basic business skill sets of the MBA, the NPS MSM also provided the student with academic exposure to federal budgeting and public policy. [Ref. 9]

Since the time of this study, the NPS MSM program has been transformed into an MBA, mostly due to popular demand. The changes add even more value to the graduate. Still meeting the subspecialty ESR's, the MBA adds the analysis of business processes that were not previously covered in the MSM. This shift toward a strategic management emphasis while keeping the analytical rigor of the MSM will ensure that graduates are even better prepared to enter the FM community.

5. Robinson and Phillips Thesis

Finally, LT Robinson and LT Phillips did a similar study in 1975 that also evaluated the NPS program's "ability to produce effective financial managers." [Ref. 10] Their thesis identified that weapon system cost analysis and budgeting were the most significant financial challenges for the navy at that time. Predating legislation that created the Acquisition Professional community, their identification of curriculum shortcomings have been resolved within the NPS curriculum yet cost analysis continues to challenge Navy planners nearly 30 years later.

C. LITERATURE THEMES

NPS theses were reviewed for the period spanning from 1956 to 2004 and two consistent themes emerged.

- No matter the time period referred to, the authors make note of the difficulty in effectively allocating funds in a fiscally constrained environment.
- URL officers who bring the reality of current fleet operations to the budget decision process are critical to the future success of the United States Navy.

In the next chapter, the structure of the managerial control system is defined. Additionally, processes that interact with the FM community structure are identified. Within those processes, accessible levers of control are acknowledged in preparation for system analysis.

III. CONTROL SYSTEM STRUCTURE

A. INTRODUCTION

This chapter defines the processes and structures that affect the qualifications of the URL officer in the FM subspecialty. Prior to the analysis of any managerial control system, the processes involved and the inputs and outputs of the system must be quantified and documented. During the definition process, levers of control are identified. A lever is a means of accomplishing a desired task or state. In this system, the desired state is effective managerial control of the process. Control is defined as “the authority or ability to manage or direct.” [Ref. 11] Levers of control enable the manager to affect the output of a control system.

In addition to control lever identification, superfluous process steps are removed. The end result is a simplified description of the process that is targeted toward the intended managerial use. In its most simplistic form, the qualification of an FM URL officer can be viewed as a cybernetic feedback model as shown in Figure (1). Defined as the “theoretical study of communication and control processes,” the field of cybernetics has many applications. [Ref. 12] Norbert Weiner, Arturo Rosenbluth and Julian Bigelow created the cybernetic concept in 1947. This trio of researchers...

adapted a Greek word meaning “steersman” to invoke the rich interaction of goals, predictions, actions, feedback and response in systems of all kinds....Early applications in the control of physical systems (aiming artillery...and maneuvering simple robots) clarified the fundamental roles of these concepts in engineering; but relevance to social systems and the softer sciences was also clear from the start. [Ref. 13]

As shown in Figure (1), the standard of the system is applied to regulate output. Physically viewed as a valve or thermostat, the manager can adjust the process to meet his desired output. Feedback to the process itself or even the system inputs allows the system to improve itself over time. Properly applied levers of control enable the system to learn from itself in a cybernetic fashion. [Ref. 14]

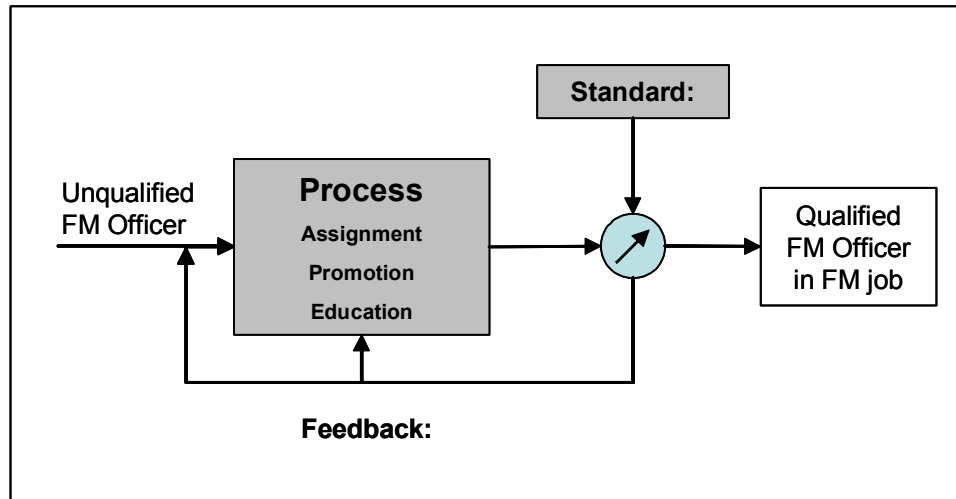


Figure 1. Overall FM Qualification Process [After Ref. 14]

Applying the model to the Navy’s FM community, inputs to the system are non-FM qualified URL officers. After progressing through the process, these officers become FM qualified. With this type of system, the manager can choose to control any combination of the inputs, process, standards, or outputs. [Ref. 14] To define the process, the inputs were the first component studied.

B. INPUT - NAVY OFFICER POPULATION

1. Current Status

As of April 2004, there were approximately 55,000 officers in the United States Navy. Breaking this population down by specialty, Figure (2) segregates the overall population and highlights the group of interest, Unrestricted Line (URL) officers. As defined by Navy Regulations, a URL officer is an “officer of the line of the Regular Navy and Naval Reserve who is not restricted in the performance of duty.” [Ref. 15] The primary difference between URL officers and all other Naval Officers is eligibility for command at sea. Staff and Restricted Line (RL) officers are restricted from that duty.

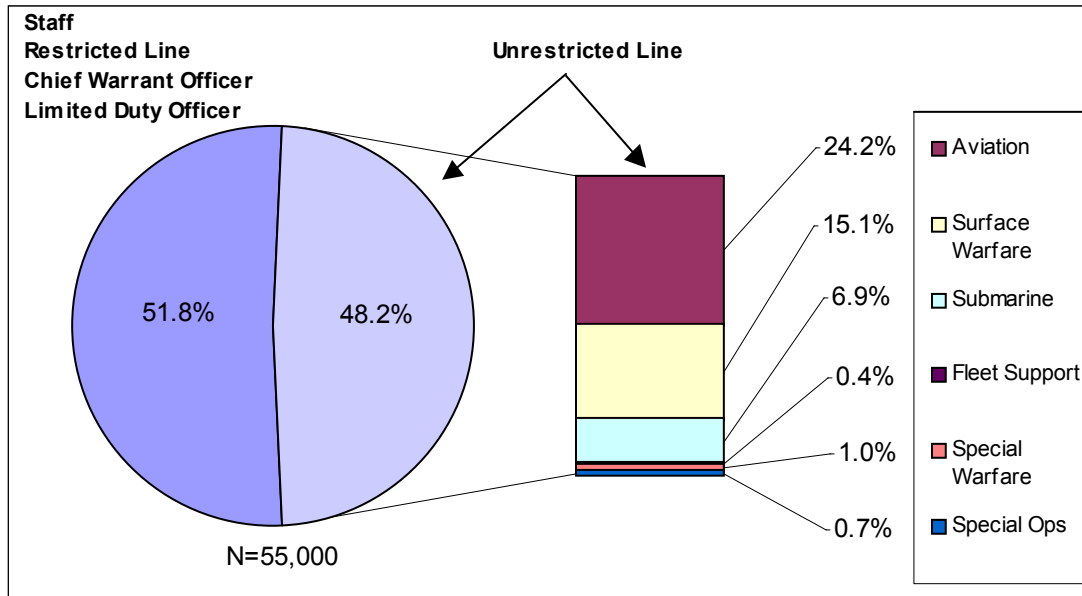


Figure 2. Navy Officer Composition

Comprising less than 50 percent of the officer corps, URL officers are further segregated into their warfare specialties. Percentages shown above are based on the total 55,000 population. Basically, there are approximately 26,000 URL officers from which to input into the FM qualification process.

2. Manpower System Coding

To process these officers through the Navy's human resources information systems, a hierarchy of codes categorizes Naval Officers. [Ref. 16] Table (2) shows the four levels of categorization that are defined for each officer. Examples are codes assigned to the author of this thesis.

Code Hierarchy	Example	Meaning
Rank	CDR (O-5)	Commander
Designator	1320	Naval Flight Officer
Additional Qualification Designator (AQD)	DJ4	ASW Patrol P-3C
Subspecialty	3110T	NPS FM Student

Table 2. Hierarchy of Officer Manpower Codes

Starting at Ensign (O-1), rank is set by the results of promotion boards. URL designators define the broad professional community that the officer is trained to operate in. These warfare specialty areas are shown in Figure (2). Officer Additional Qualification Designators (AQD's) are used to assign more detail to the warfare qualifications of the URL officer. For example in the aviation community, two Commanders, one an F/A-18 Hornet pilot and the other an F-14 Tomcat pilot, would have the same rank and designator, but different AQD's. In addition to warfare specialties, the AQD is also used to track Joint Service Officer (JSO) and Acquisition Professional (AP) qualifications.

Finally, the subspecialty code is used to document education and experience in addition to the URL officer's primary warfare expertise. If the Tomcat pilot referred to above had just graduated from the FM program at NPS, a subspecialty code of 3110P would be added to his record. Specific subspecialty codes that apply to business operations of the Navy are shown in Table (3).

Subspecialty Code	Description
3000	Resource Management and Analysis
3100	General Resource & Acquisition Management
3110	Financial Management
3111	Financial Management - Comptroller
3112	Financial Management - Major Comptroller
3120	Logistics and Transportation Management
3121	Logistics and Transportation Management - Logistics
3122	Logistics and Transportation Management- Transportation
3130	Manpower Systems Analysis Management
3140	Shore Installation Management
3150	Education and Training Management
3210	Operations Research Analysis
3211	Operations Research Analysis - Analysis and Assessment
3212	Operations Research Analysis - Logistics

Table 3. Business Oriented Subspecialty Codes [After Ref. 17]

With the skill sets shown above covering operations, logistics, finance, human resources, and training, a group of officers with these subspecialties could effectively manage any Navy enterprise.

This hierarchy and coding system is used by the Navy's manpower distribution organization, the Navy Personnel Command (NPC). A plethora of data in addition to this

hierarchy of skill coding is kept in the Officer Personnel Information System (OPINS) database. The Officer Assignment Information System (OAIS) accesses the OPINS data and is used by NPC to match officers and jobs. Just as officers are coded with these four levels, so are the jobs, or billets as they are referred to by NPC.

C. OUTPUT-FINANCIAL MANAGEMENT JOB STRUCTURE

As Figure (1) indicates, the output of the system is the assignment of a fully qualified officer into the FM billet structure. One of the three main components of the FM qualification process is experience gained by working in an FM position. In order to gain this experience, the officer must be assigned by NPC to one of the 409 officer FM positions shown in Table (4). Designator and rank first categorize each position.

Type of Officer Required (Designator)	Rank					Totals
	CAPT	CDR	LCDR	LT	LTJG	
Any Officer (1000)	12	13	8	1		34
Unrestricted Line (URL)						
Any URL Officer (1050)	6	13	4	1		24
Fleet Support (1100)		3	3			6
Surface Warfare (1110)	2	4	5	1		12
Submarine (1120)	1	1		2		4
Special Warfare-Seal (1130)			1			1
Aviator (1300)	2	4	3			9
Restricted Line and Staff Corp						
Human Resources (1200)		4	9	2		15
Engineering Duty (1440)		1				1
Aerospace Engineering Duty (1510)			1			1
Cryptology (1610)		4	2			6
Intelligence (1630)		2		1		3
Reserve Recruiting Full Time Support (1687)			1			1
Medical Service Corps (2300)	11	22	35	48	8	124
Supply Corps (3100)	11	48	55	28	4	146
Civil Engineering Corps (5100)	2	11	8	1		22
Totals	47	130	135	85	12	409

Table 4. Navy Financial Management Officer Billet Structure

1. FM Billet Structure

As discussed previously, the designator defines the type of warfare experience required for the position. For example, the Commander Naval Air Forces, Atlantic Fleet (COMNAVAIRLANT) budget officer is coded as an aviator (1300) billet, while the

Assistant Director for Business Operations at Program Executive Officer (PEO) Ships requires a Surface Warfare (1110) officer.

As shown in the first two data rows of Table (4), 58 billets do not require a specific warfare specialty. The thirty-four 1000-coded billets can be filled with any officer having the correct rank and subspecialty. Coded 1050, the other 24 must be filled with an officer who has a URL designator. Operational fleet experience is deemed necessary for these positions.

Other FM billets are distributed over the many Restricted Line (RL) and Staff communities as shown above. Figure (3) shows the proportional breakdown of billets within the FM community. As depicted in the chart above and the graph below, the Staff Corps and RL communities fill the largest proportion of the Navy's FM billets.

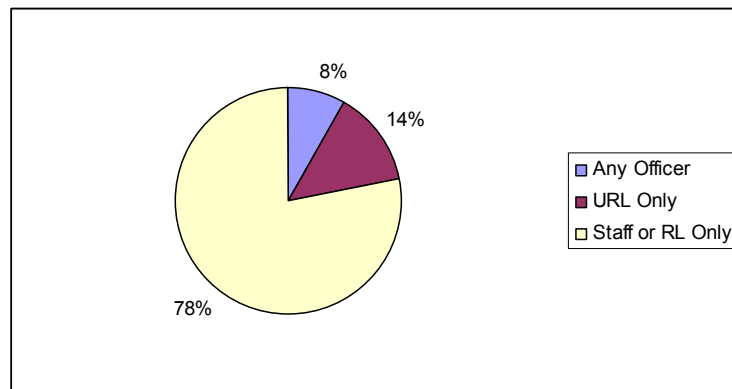


Figure 3. FM Billets by Type (Designator) of Officer Required

2. FM Billet Prerequisites

In addition to the matrix shown above, each individual billet has one of five prerequisite education and experience levels assigned to it as shown in Table (5).

	Job Prerequisites					
Billet Code	3110Q	3110P	3111P	3110R	3110S	
Education	Masters	Masters	Masters	No	No	
Experience Tours	1	0	0	2+	1	
Rank						Totals
CAPT	28	15	1		3	47
CDR	9	84	1	6	30	130
LCDR	4	80		6	45	135
LT	1	20			64	85
LTJG		1			11	12
Totals	42	200	2	12	153	409

Table 5. FM Billet Prerequisites

A billet designation has two components, education and experience. As shown in Table (5), FM positions require education, experience, or the combination of the two. An officer who has earned an FM Master's degree from the Naval Postgraduate School (NPS) meets the education qualification. Degrees from other universities are approved by NPS on case-by-case basis. The experience qualification is achieved after working in an FM billet for 18 months. The mix of billet prerequisites is shown in Figure (4).

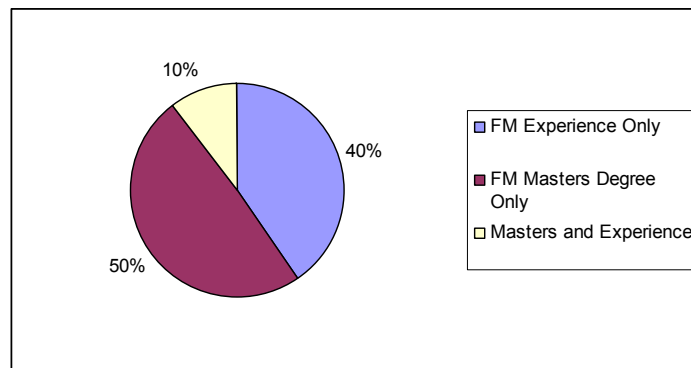


Figure 4. FM Billet Prerequisites

D. PROCESS -NAVY OFFICER ASSIGNMENT

The process used to match a qualified candidate to each FM billet is shown in Figure (5). Officer Projected Rotation Dates (PRD's) set the input to the process. When an officer is within one year prior to rotation, he contacts his detailer. The detailer at

NPC initiates the assignment process. Using the hierarchy of qualifications as the standard, the officer is matched with his next job.

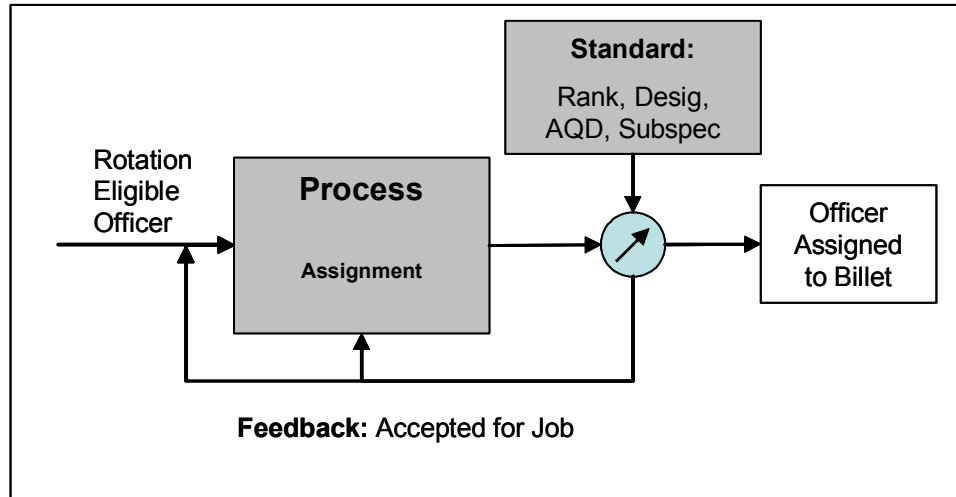


Figure 5. Assignment Sub-Process Diagram [After Ref. 14]

1. Detailer-Placement Officer Interaction

The assignment process is the result of negotiation between a detailer and a placement officer at NPC in Millington, TN. The detailer represents the career needs and personal desires of the individual officer while the placement officer represents the needs of Navy commands. The detailer wants to get the best possible job for his officer while the placement officer, similar to a “headhunter,” is tasked with finding the best-qualified officer to fill open positions in his assigned commands. This balance of priorities is often expressed as the detailing triangle as shown in Figure (6).

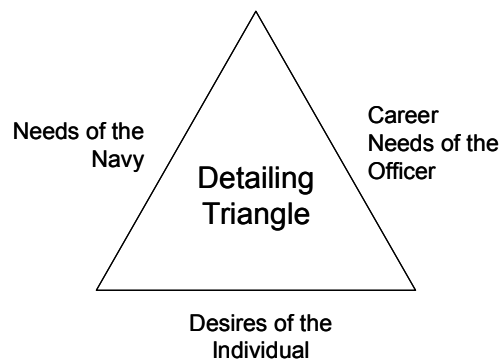


Figure 6. Navy Assignment (Detailing) Triangle

The placement officer, acting as the command's advocate, represents the "Needs of the Navy" side of the triangle. The "Career Needs of the Officer" and "Desires of the Individual" components are balanced by the detailer to match the officer to available jobs. In many cases, this negotiation results in a compromise from one or both parties in the exchange. This balance of priorities is complex and subject to supply and demand. If a specific command needs an officer with certain qualifications, many times the desires of the officer are sacrificed to meet the needs of the Navy.

As shown previously in Table (4), fourteen different types of officers can fill FM billets. Each designator or community has a group of detailers to represent its constituent base. Each designator community has at least three different detailers representing rank based groupings of Captains (O-6), Commanders (O-5) and Lieutenant Commanders (O-4) and below. To place an officer in an FM billet requires action from one of 42 different detailers.

This interaction between detailer and placement officer is shown in Figure (7). On the the placement side of the process, there are 27 different placement officers representing the 219 Navy commands that have FM billets.

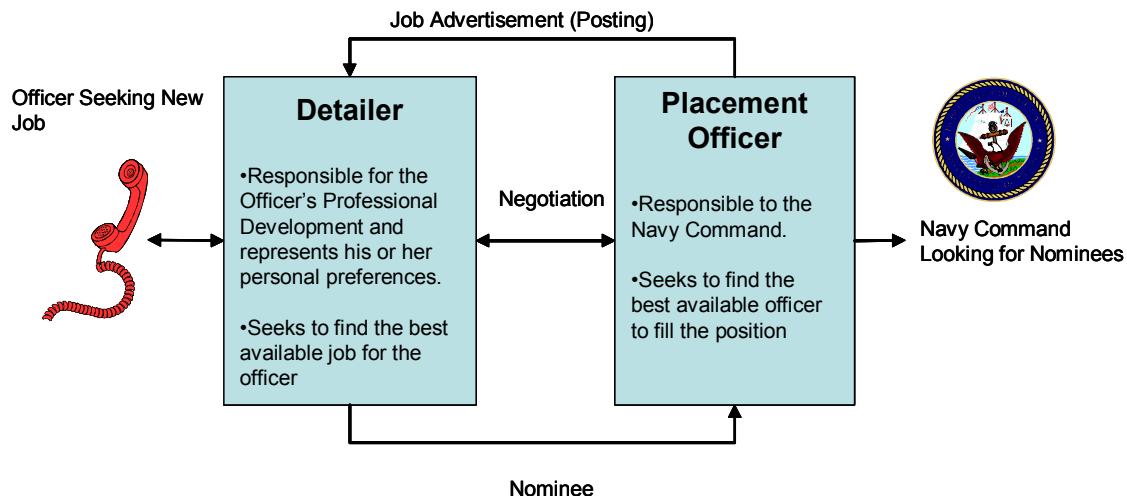


Figure 7. Simplified Officer Assignment Process Diagram

Referring to the hierarchy of coding in Figure (2), the Navy’s manpower organization is structured around the top three: rank, designator and AQD. To fill any FM position in the Navy, one of 42 detailers and one of 27 placement officers must negotiate and come to an agreement when an FM qualified officer becomes available for assignment.

2. Process Details

Once the detailer finds a billet that is both available and matches the Projected Rotation Date (PRD) of the officer he is trying to place, a proposal is generated in the Officer Assignment Information System (OAIS). OAIS has a linear tracking function to manage these proposals. The detailer initiates this process. Each stakeholder in the process must approve the officer-to-billet match or the proposal is returned to the detailer as disapproved. The approval process known as a “chop chain” is shown in Figure (8). All proposals are first routed to the subspecialty manager. This Government Service (GS) employee documents experience, education and further routes the proposal for a waiver if needed. This is a critical control point for the utilization rate investigated by Blaisdell. [Ref. 4] For example, a recent FM graduate from NPS would require a waiver if that officer was not being ordered into a FM (3110X) billet.

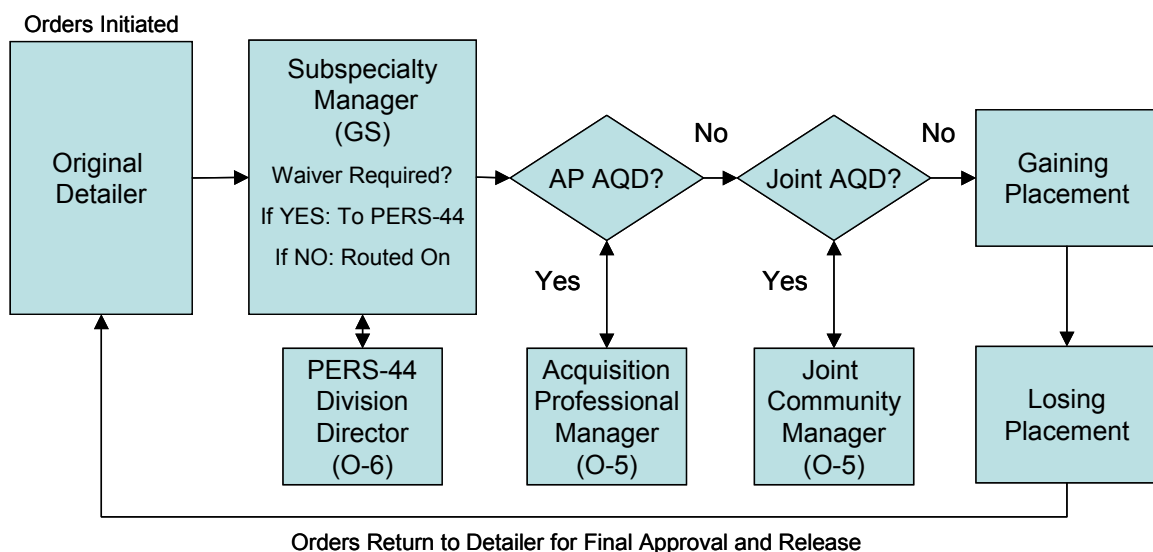


Figure 8. Orders Approval Process

After evaluation by the Subspecialty Manager, the proposal is optionally routed to the Acquisition Professional (AP) and Joint community managers. The routing criteria used is whether the officer is inbound or outbound to a Joint/Acquisition Professional (AP) job or if the officer possesses an AQD for one of those two skill sets. The next stakeholder in the process is the officer representing the command, the placement officer. To fill a billet at the FMB headquarters in the Pentagon, the gaining placement officer would first look at rank and designator to determine fit. If those two variables match, then subspecialty is the final check.

In the case of Navy staff jobs at the Pentagon, a nomination is informally made to the manpower point of contact at each staff. Normally, candidates records are sent individually and the staff is given right of refusal. A managerial dilemma can be created by refusal. Due to population numbers and the timing of rotation, the officer proposed is frequently the only close fit to the impending opening on the staff. Unless a perfect fit is proposed, the staff is forced into one of three options.

First, the job will be filled with an officer meeting less than the required qualifications. If this is unacceptable, the incumbent in the job will depart and the position will sit empty until a fully qualified officer is assigned. For most staffs, this alternative is avoided. Presented with this choice, the incumbent officer will be forced to extend to cover the gap or the leadership of the staff will become involved and inject a personal query into the NPC chain of command. Usually, this path results in an early transfer or re-routing of a qualified officer from another command.

3. Billet to Officer Mismatches

There exists a mismatch in the control leverage of the stakeholders shown in Figure (8). Rank and influence are significant forces in the detailer-placement officer interchange. All of the major decision makers in the approval process outrank the subspecialty manager, the only advocate for the FM community as a whole. This Government Service (GS) employee ensures that education and experience subspecialty designations are entered into the officer's manpower record. However, this analyst is not

directly involved in the negotiations that occur between the detailers and placement officers. Additionally, the subspecialty manager is responsible for all of the 90 or so subspecialties that apply to URL officers not just the FM ones.

4. Assignment Levers of Control

Referring to Figure (5), the inputs to the assignment sub-process are set by officer career progression and rotation. The process itself is owned entirely by NPC. While FMB has informal approval authority for positions on his Pentagon staff, there exists no formal authorized lever of control.

E. PROCESS - NAVY OFFICER CAREER PROMOTION

1. Promotion Limits

The promotion of military officers is a tightly controlled process both internally and externally. Externally, the promotion system is regulated by two controls. The combination of United States Code (USC) Title 10 and end-strength levels delineated in the annual National Defense Authorization Act limit the flow of promotion. USC 10 limits the number of regular commissioned officers to 55,000 for the Navy. [Ref. 18] Based on annual officer end strength, the distribution by rank is capped by the Defense Officer Personnel Management Act (DOPMA). DOPMA affected ranks are shown in Table (6).

Number of Commissioned Officers	LCDR		CDR		CAPT	
39,000	8,735	22.4%	5,681	14.6%	2,437	6.2%
42,000	9,203	21.9%	5,902	14.1%	2,544	6.1%
45,000	9,671	21.5%	6,123	13.6%	2,651	5.9%
48,000	10,139	21.1%	6,343	13.2%	2,758	5.7%
51,000	10,606	20.8%	6,561	12.9%	2,864	5.6%
54,000	11,074	20.5%	6,782	12.6%	2,971	5.5%
57,000	11,541	20.2%	7,002	12.3%	3,078	5.4%

Table 6. DOPMA Regulated Rank Ceilings [After Ref. 18]

The number of commissioned officers used as the entering argument for this metric excludes flag, medical, dental and warrant officers. It is noted that as the officer force size grows, the proportion of the more senior ranks decreases. In response to service requests, Congress has temporarily authorized a six percent increase in the DOPMA ceilings to accommodate the manpower demands made by the Joint community. Ultimately, these external limitations control the output levels of the promotion process shown in Figure (9).

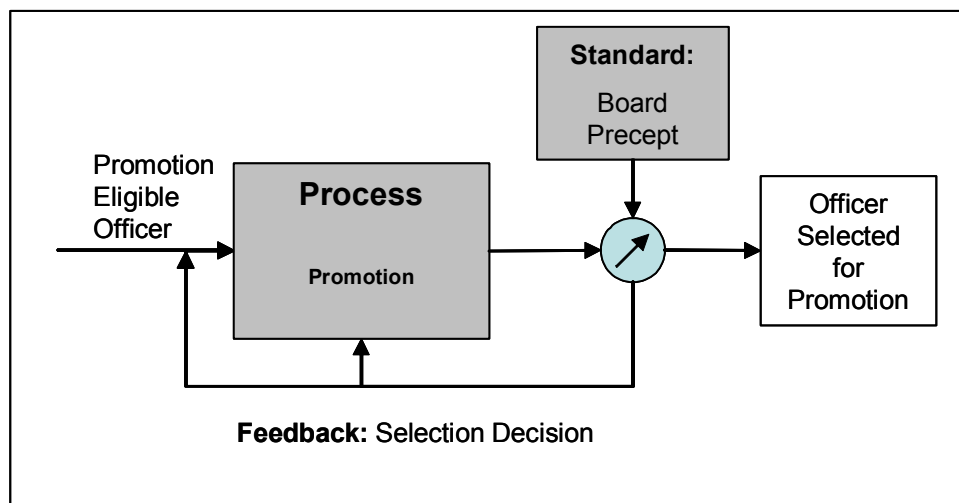


Figure 9. Promotion Sub-Process Diagram [After Ref. 14]

2. Promotion Flow

With the output controlled by federal law, DoD correspondingly controls the input by setting promotion rate goals and desired time-in-grade guidelines. The DOPMA fixed output is extrapolated to a fixed system input. Current and desired DoD guidelines are shown in Table (7). Operating as an “up or out,” system, military promotion is similar to a one-way check valve. Officers who fail to select multiple times must depart the service. Using this promotion method creates a closed labor pool for officers. Within the URL ranks, there is no opportunity for middle or senior level hires from outside the service.

Statutory Boards			DoD	Current	DoD
Promotion to	Grade	Current Rate	Guideline	YOS	Guideline
ENS	O-1				
LTJG	O-2	approx. 100%		2	1.5
LT	O-3	approx. 100%		4	4
LCDR	O-4	80%	80%	10	9 to 11
CDR	O-5	77%	70%	15.3	15 to 17
CAPT	O-6	55%	50%	21.7	21 to 23
Overall		34%	28%		

Table 7. Prescribed Promotion Rates and Timing [After Ref. 19]

The closed labor pool phenomenon significantly complicates the control problem for the FM community manager. For example, the FM qualified Captain who has 25 years of service was hired in 1979 and can only be replaced by another officer progressing up the promotion ladder. Recognizing the difficulties involved with managing this closed system, DoD allows the services to deviate from promotion rates by as much as 10 percent and Years of Service (YOS) by as much as a year on either side of the standard.

3. Promotion Board Process

Two distinct selection processes are applied to the career progression of Naval Officers. A statutory board determines rank promotion and an administrative board determines career milestone selection. As described above, Congress and the Office of the Secretary of Defense (OSD) regulate the input and the output of the promotion process. Additionally, these two organizations external to the Navy also regulate the statutory board process. Setting guidelines of conduct and explicit reporting requirements, DOD and federal law have significant inputs to the process. The process itself is conducted annually at NPC in Millington, TN. Selection board members go into isolation, similar to a jury sequester, and spend weeks reviewing the service records of eligible officers to determine which ones are the best qualified for promotion.

URL Promotion board members are approved by the Secretary of the Navy (SECNAV) and must include five aviators, four surface warfare officers (SWO) and three submariners. [Ref. 20] One of the SWO's can be a Special Warfare or Special

Operations officer. Additionally, DoD and the Chairman, Joint Chiefs of Staff (CJCS) require at least one of the members to be Joint and another to be Acquisition Professional (AP) qualified.

4. Board Precepts

SECNAV designates a board president and gives him explicit written guidance on board conduct. This document is referred to as a board precept. Tasked to determine the “best qualified” officers, the board members use the precept to guide their decision-making. The overarching goal for all URL boards is recognizing officers who have demonstrated operational excellence. The following extract is from the second paragraph of the FY-05 URL Captain Board Precept.

The needs of the Navy dictate that our future leaders possess the qualities to excel as leaders and commanders or in support of operational commanders. Proven excellence in leadership positions is the ultimate measure of the qualities required. **Performance while in command, at sea as well as potential for major command, is the ultimate test of fitness for promotion.** [Ref. 21]

As a point of comparison, the same paragraph for the FY-05 Commander Board Precept is shown below.

The needs of the Navy dictate that our future leaders possess the qualities to excel as leaders and commanders or in support of operational commanders or positions of leadership in direct support of fleet operations. Proven excellence in leadership positions is the ultimate measure of the qualities required. **Performance while in command, at sea as well as potential for major command, is the ultimate test of fitness for promotion.** Officers may have also demonstrated leadership, skill, integrity and resourcefulness in other difficult and challenging joint and in-service assignments. [Ref. 22]

These documents highlight two main points. First, operational excellence is critical for URL promotion and no other skill set can compensate for a lackluster performance at sea. Secondly, this critical control device does not appear to be carefully screened. As the Captain precept states, command at sea is the ultimate test for promotion. However, the number of officers who would have command at sea prior to a Commander promotion board is very small. Most competitive submariners and SWO's

would be just completing their Executive Officer (XO) afloat tours and aviators would be at the conclusion of their Department Head (DH) tours. Finally, tasking the board members to look for the potential for major command is premature at a Commander selection board.

Judge Advocate General (JAG) officers from the CNO's staff and the Chief of Naval Personnel (CNP) staff draft generic precept language annually. Included in this boilerplate text are further items that a selection board should consider after ascertaining that the subject officer has proven excellence in the operational realm. Appearing as the third paragraph in the precept, these skill sets are identified as important for selection to Captain.

- Graduate Education
- Innovation and Efficiency
- Acquisition Professional (AP)
- Joint Duty
- International Affairs
- Astronaut
- Anti-Terrorism Force Protection
- Navy Space Cadre
- Retention Effectiveness
- Naval Special Warfare Experience

AP and Joint Duty inclusion on this list is in response to the external reporting requirements by DoD and CJCS respectively. Both organizations expect the promotion of AP and Joint officers to equal or exceed the overall promotion rate. Graduate education is the second skill set listed after operational acumen. With the exception of operational excellence, precept language does not imply that the skill sets listed above are in any order of priority. Specifically, education guidance states:

Postgraduate education and specialty skills represented by proven subspecialties are important to our Navy and represent a key investment in our future. Navy needs officers with formal technical and military

education in a time of increasing technological sophistication. Advanced education achievement is a significant career milestone in the development of future Navy leadership. The utilization of advanced education in subspecialty tours is an equally significant career milestone. In determining an officer's fitness for selection, selection boards shall favorably consider graduate degrees, military education, and experience in specialized areas. [Ref. 21]

The language identifies the importance of a proven subspecialty, however it only highlights "technical and military" education. While military education is undoubtedly important for URL officers, the criticality of a technical education is debatable. The recent creation of the Information Professional (IP) community augments an already robust mixture of Restricted Line and Staff Corps officers who are technically proficient. There are generic statements about efficiency in the Innovation and Efficiency section, but nowhere in the precept language does the SECNAV specifically identify business acumen or the ability to lead in an enterprise situation.

5. Interaction between Statutory and Admin Boards

This analysis identifies another critical control element. If command at sea is the primary criteria for selection to Captain, then the selection for command at sea is very much a prerequisite for selection to Captain. Conducted in identical fashion to the statutory boards, administrative or "admin" boards are used to select officers for career milestones such as command at sea. The interaction between statutory promotion and administrative selection is shown in Figure (10).

In most cases, the admin board controls a significant aspect of the officer's next statutory board. Using a SWO as an example, the typical officer is selected for department head (DH) when he is a Lieutenant (LT). Performance in his DH tour will determine his selection for Lieutenant Commander (LCDR). However, it is likely that those officers who were not selected for DH will also not promote.

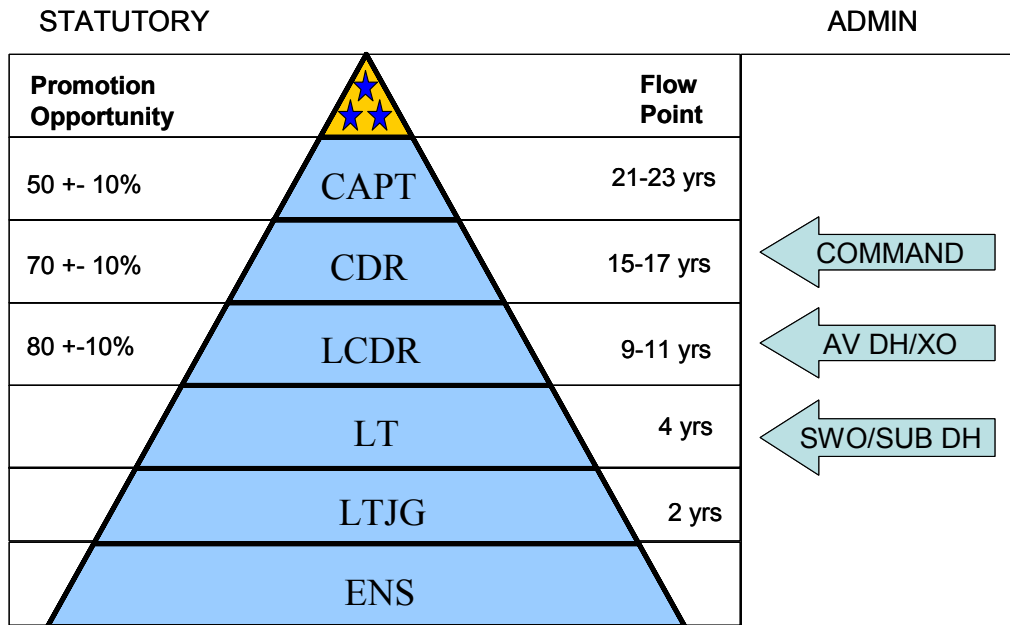


Figure 10. Interaction of Statutory and Admin Selection Points [After Ref. 23]

This dependency is most evident at the CDR Command level. As shown in the precept language, performance in command at sea is the primary qualifier for promotion to Captain. All things being equal, those officers not selected for command have little potential for selection to Captain over those officers who have served in command. Within the confines of the promotion process, the FM-qualified URL Captain has successfully screened through three statutory boards and either two or three admin boards.

6. Promotion Levers of Control

As suggested by Figure (9), the inputs, outputs and process of promotion are tightly controlled by regulations and other external organizations. Referring to the cybernetic model, the only lever of control accessible by the FM community manager is the standard applied to promotion. In the case of the promotion sub-process, this standard is accessed through the board precept.

F. PROCESS-EDUCATION

As demonstrated in the Literature Review, the Naval Postgraduate School's FM program is effective whether one is measuring cost, academic skill level or applicability to the FM positions within the Navy.

1. Curriculum Sponsor

FMB as FM curriculum sponsor has several mechanisms to control the education sub-process shown in Figure (11). By setting the Education Skill Requirements (ESR's), he controls the standard.

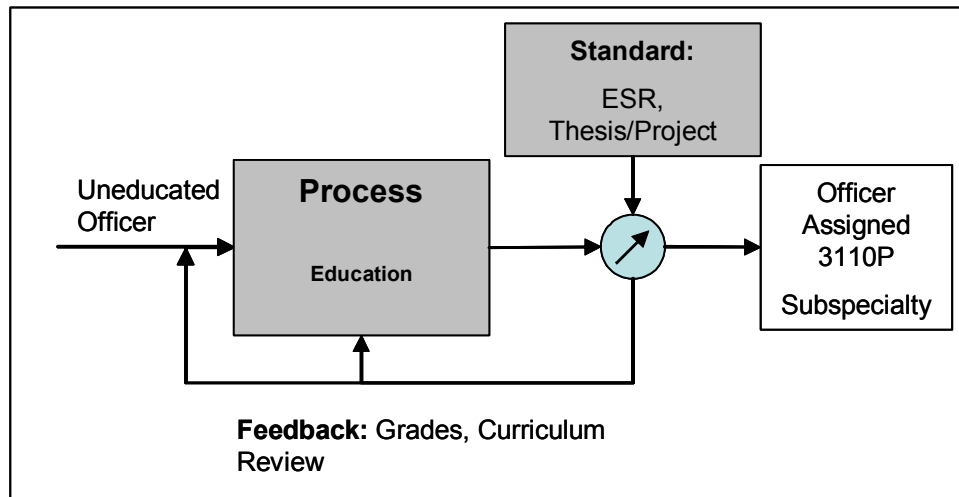


Figure 11. Education Sub-Process Diagram [After Ref. 14]

By conducting curriculum reviews, he holds the faculty to the ESR's and provides feedback about the quality and relevance of the curriculum to NPS. By participating annually in the NPS quota plan, he has input to the number and designator mix of incoming students. Controlling the inputs and the standard, the FM community manager has significant control over the NPS-owned education process.

Students are assigned to NPS via the assignment process described earlier in this chapter. Assuming there is an available quota, prospective NPS students must meet minimum academic levels before assignment to NPS. The NPS placement officer applies

a standard referred to as the Academic Profile Code (APC). The prerequisite for the FM program at NPS is an APC of 345. Decoded, this means the incoming officer must have an undergraduate Grade Point Average (GPA) greater than 2.2 and have taken at least one pre-calculus course with a grade of C+ or better. [Ref. 24] Meeting or exceeding this APC is the only quality standard evaluated by the NPS placement officer prior to assignment at NPS.

2. Education Levers of Control

FMB controls or has access to the standards, inputs, and process. Factors not directly controlled by the FM community manager within the education sub-process are the quality of the inbound student and NPS faculty hiring decisions.

G. CONTROL SYSTEM SUMMARY

This chapter defined the processes and structures that affect the qualification of line officers in the FM subspecialty. With the processes, inputs and outputs of the system quantified and documented, analysis of the system can begin. During the definition process, levers of control were identified and superfluous steps were removed. The result is a simplified description that allows the manager to visualize where he can insert control into the system.

1. System Complexity

As described in this chapter, the process to match a qualified officer to an open FM billet is complex. This complexity is magnified when viewed from the perspective of a 20-year career length. In order to hold the most rigorous FM subspecialty, a 3110Q-coded Captain must pass through sub-elements of this system multiple times. Entering through the education process once, he participates in the assignment process approximately 10 times with at least one of those assignments to an FM billet. Adding the third sub-process, he must successfully screen through three statutory promotion and either two or three administrative selection boards.

2. Potential for Improvement

To navigate skilled officers through this long and challenging process, the FM community manager must closely monitor and apply control where needed. Of the three processes, FMB has the most control over education. He has less control over assignment and almost no control over promotion. Figure (12) summarizes these assessments and estimates the potential for improvement.

Process	Control Level	
	Current	Potential
Assignment	Low	Med
Promotion	None	Low
Education	High	High

Figure 12. Assessment of FMB Control

Despite low levels of control in critical FM qualification sub-processes, there is potential for improvement. The following chapter defines the role of business and financial management education in the Navy's overall strategy. Applying levers of control and tailoring incentives to behavior can achieve the FM community manager's desired strategy.

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IV. BUSINESS EDUCATION'S ROLE IN NAVY STRATEGY

A. INTRODUCTION

Strategy is about positioning an organization for sustainable competitive advantage...Formulating an effective strategy requires analysis and synthesis, and therefore is as much an analytic as a creative process.
[Ref. 25]

This chapter builds upon the managerial control system structure formulated in the previous chapter by defining the strategic environment that it must operate within. By analyzing the strategy, the FM community manager can ensure changes made to the control system fit the Navy's overall strategy and ultimately create a sustainable enterprise-management advantage.

1. Business Mindset of Current Leadership

There is no doubt that Donald Rumsfeld's second tenure as Secretary of Defense will be remembered for his transformational initiatives. While managing extensive long-duration combat operations in both Afghanistan and Iraq, the Secretary has also forced the services to take a hard introspective look at how they do their business. Secretary Rumsfeld oversaw the cancellation of both the Crusader self-propelled artillery vehicle and the Comanche helicopter programs due to inefficiency. These actions put every other military weapons program that was behind schedule or over-cost under serious scrutiny. The Secretary was not afraid to cut his losses. His transformational mantra forced innovation and efficiency, the same qualities that every business in the world seeks to attain.

Secretary Rumsfeld was not alone in this mentality. Key figures in the Navy's chain of command are well versed in business operations either through training or actual practice. President Bush was a former Texas governor and earned an MBA from Harvard. General Myers, Chairman, Joint Chiefs of Staff, earned his MBA from Auburn University. Within the Department of the Navy, Secretary England was an Executive

Vice President at General Dynamics and earned his MBA from Texas Christian University. At the helm of the organization, Admiral Clark, Chief of Naval Operations was also an MBA holder.

Key leaders in national strategy determination have all learned to analyze systems and processes with the goal of optimizing the bottom line. This prevalence of business education and experience has become part of the daily operations of the United States Navy and ultimately influences its strategy.

B. NAVY STRATEGY

1. Sea Power 21

Midway through his tenure as Chief of Naval Operations, Admiral Clark presented an enterprise-wide system model of the Navy's role in the nation's defense. Referred to as Sea Power 21, the concept has three main components. [Ref. 26]

- Sea Strike: Power Projection
- Sea Shield: Global Defense
- Sea Basing: Reducing Dependence on Overseas Shore Infrastructure

The “glue that binds” these three components together is ForceNet. A combination of information technology and networked sensors, ForceNet accelerates the interaction of these components and allows the Navy to “dominate the battlespace.” [Ref. 26]

2. Infrastructure Processes

Three processes have been identified that support the development of the warfare triad shown above. These infrastructure processes are:

- Sea Trial: Innovation and Technology Development
- Sea Warrior: Training the Sailors
- Sea Enterprise: Increasing Efficiency and Streamlining

Referencing the research and development (R&D), human resources, operations and financial departments found in any corporation, Sea Power 21 is rooted in classic business strategy.

3. Recapitalization Challenge

The biggest challenge identified within the business of the Navy is identifying and “allocating resources to recapitalize the Navy.” “Sea Enterprise will reduce overhead, streamline processes, substitute technology for manpower and create incentives for positive change.” [Ref. 26] The CNO’s identification of the power of properly aligned incentives to influence organizational behavior is an economic theme that is repeatedly reinforced during a formal business education.

4. Business Skill Sets

As discussed in the previous chapter, the CNO’s analysis of the skill sets required by Navy leaders is consistent.

Our Navy values operational excellence as its highest priority and the vast majority of our training is devoted to sharpening tactical skills. However, it is also important that our leaders understand sound business practices so that we can provide the greatest return on the taxpayer’s investment. [Ref. 26]

The CNO further explained an executive business initiative for junior flag officers at NPS’ Center for Executive Education. While productive, a case could be made that it is almost too little too late. These officers typically have 24 to 28 years of service and if they had understood “sound business practices” earlier in their careers, the Navy would be much better for it. To meet the strategic goals of Sea Power 21, the Navy must invest heavily in increasing the business acumen of its entire URL officer corps. The first step in this strategy is a robust business education such as an MBA.

C. THE MBA TRANSFORMATION

Most MBA programs utilize a combination of analytical methods with actual case analysis to teach business concepts. First, the tools of analysis such as capacity throughput and return on investment are taught and then they are applied to a specific organizational problem. Examples exist within the spectrum of business education that concentrate on analytical methods or the other extreme, only case analysis. However, a combination of the two seems to produce the typical MBA graduate.

1. Navy Applicability

After learning these tools of analysis, the student applies them to dozens of cases. During this process, a transformation occurs. Slack resources and inefficient systems begin to stick out like sore thumbs. The student learns a methodical and rigorous method of analyzing an organization whether it is a clothing manufacturer, a cranberry processor or a more complex organization such as NASA. A recent Harvard MBA graduate wrote:

One of the best analogies I heard at business school was the comparison of a business manager to a medical doctor...If the doctor observes something outside normal parameters, she investigates further, until the source of the symptoms is diagnosed. An MBA provides tools to conduct similar analyses with organizations...Like a doctor, when a student identifies a vital sign outside normal specifications, he digs deeper to find the root of the problem...Naval officers go through the same systematic procedures on board ship, submarine, or squadron. Good leaders constantly pulse their areas of responsibility, be it maintenance, training personnel or watch standing. If an area does not measure up, officers assess the situation, investigate, identify the problem source, formulate an action plan and execute it... [Ref. 27]

Like the Navy Lieutenant quoted above, the author of this thesis agrees there is no better educational process to build future Naval leaders than an MBA. The NPS FM program goes even further by adding additional value to future Navy financial managers. In 18 months, vice the 21 spent at Harvard, an NPS student earns an MBA and completes

both his Joint Professional Military Education (JPME) and the education requirements for Acquisition Professional (AP) Project Manager Level II.³

These extra achievements are value-added tools for the naval officer to use in his future career endeavors. With a 14 percent reduction in time as a student, the NPS student not only learns the skills of an MBA graduate, but also applies them to the challenging problems found in defense and public organizations. To some, 14 percent does not sound like much, but if 100 NPS students were sent to Harvard instead of NPS, it would require an investment of 25 additional man-years. Borkowski concluded in his thesis that this combination is efficient, effective and creates a “best of both worlds” educational environment. [Ref. 5]

D. SETTING DIRECTION

Once the strategy is formulated, the work has just begun. Creating the Sea Power 21 framework in which to improve his process, the CNO used his MBA skills and realized that a strategy must have priorities. In his first year, it was Alignment. In year two, his project was Revolution in Training. Following these two initiatives, his third project was Revolution in Personnel Distribution. Realizing “every organization in the world is in the battle for people and we had better figure out how to compete in this market or we’re not going to have the Navy that we dream of” the CNO used a free market analogy to describe the Navy manpower system. [Ref. 28]

And it struck us that if we understood that we were in a battle for the human resources that we can get, we needed to understand the marketplace that we were working in. And if we understood this marketplace we would start to begin to understand that we'd better be careful about this assignments methodology. [Ref. 28]

In order for his strategy to be properly executed, the CNO is very dependent on the people conducting the execution. Because NPC controls the career progression of the CNO’s managers, distribution process strategy must align with overall strategy.

³ As defined by the 1990 Defense Acquisition Workforce Improvement Act (DAWIA).

E. MANPOWER STRATEGY

NPC's head of distribution has aligned his strategic goals with the CNO's. Similarly assessing that the manpower marketplace of an all-volunteer force is a delicate balance, PERS-4's top four goals are:

- Provide Optimum Customer Service to Our Constituents
- Do What's Best for the navy
- Increase Morale and Retention throughout the ranks
- Establish Training as a top priority [Ref. 29]

F. SUMMARY

Chapter I identified many legislated responsibilities for ASN (FM&C). This office's primary strategy revolves around the execution of those responsibilities. Overall, ASN (FM&C)'s strategic goal is the effective management of financial activities within the Department of the Navy.

Breaking this strategic goal down into various components, the underlying manpower goal is to have every FM position filled with a properly qualified officer. Responsible for the 409 officer financial management positions distributed throughout the Navy, the FM community manager must align control and incentives to support Navy strategy. URL FM officers, managed by FMB, provide the core business acumen of the United States Navy. Every opportunity should be taken to educate, promote and assign these officers to positions where they can hone their business skills. From this core group, the CNO will have a cadre of officers with the skill sets he requires to meet the Sea Enterprise component of Sea Power 21.

With the system structure and process flows defined, the following chapter will analyze the FM community and identify weaknesses in control. Once the weaknesses are identified, further examination will identify potential improvements.

V. MANAGEMENT CONTROL SYSTEM ANALYSIS

A. INTRODUCTION

The process used to build line officers into financial managers has three major components: promotion, assignment and education. As noted in the structure analysis, these processes do not continuously act upon Naval officers. Instead, the officers interact with these processes at multiple times during their careers and only during specific time windows. This complex interaction creates weaknesses in the overall system. These weaknesses were identified by first analyzing the status of the system. All data presented in this chapter are as of April 2004.

Once the current status was determined, it was compared to historical data points to investigate trends. With a firm determination of the system status, the author analyzed the process itself by first evaluating the overall control environment. System risks and communication flow were explored prior to identification of managerial control system weaknesses. [Ref. 30] Once weaknesses were identified, recommendations for improvement were developed. These recommendations are discussed in the following chapter.

B. CURRENT SYSTEM STATUS

1. Billet to Officer Match

A snapshot was taken to determine how well the managerial control system was performing. Table (8) summarizes the billet to officer match rate as of April 2004. Of the 409 FM billets, only 361 were filled, creating an 11.7 percent FM billet vacancy rate. This vacancy rate approximates the Navy-wide shore duty vacancy rate, but is a variable that the FM community manager should monitor.

Billet Prerequisites	FM Billets	Incumbent Officer					
		3110	31XX	3110Q	3110P	3110R	3110S
3110P Education Only	200	75	85	13	20	2	28
3110Q Education and Experience	42	26	27	8	4	6	7
3110R Multiple Experience Tours	12	9	9		2		2
3110S One Experience Tour	153	62	72	3	12	4	14
3111P Comptroller (Education Only)	2	2	2				2
Totals	409	174	195				
Percent of Total FM Billets	100%	43%	48%				


 Officer Fully Qualified to Fill Billet

Table 8. Current Officer to Billet Prerequisite Match

Table rows define the billet's subspecialty code prerequisites. Columns in this chart show the subspecialty qualification of the officer who is filling the billet. The highlighted cells in Table (8) show the 62 matches having officers who are fully qualified for the position that they hold. As shown above, 43 percent of FM billets have an officer with any of the FM qualifications (311X). If this criterion is expanded to include officers with any business-related subspecialty such as Logistics, Manpower and others shown in Table (3), the qualification rate rises to 48 percent. With 62 of the 409 (15 percent) of the FM billets filled with fully qualified officers, the process did not appear to be effectively meeting its goals as of April 2004.

Further qualifying the results, Table (9) shows the fill rates of the 90 billets that URL officers are eligible to fill. Organized by designator, it shows that certain communities are more successful than others at assigning officers to FM positions.

Billet Designator	3110X		Total URL
1000 (Any Officer)	18	53%	34
1050 (Any URL)	5	21%	24
1100 (Fleet Support)	5	83%	6
1110 (SWO)	3	25%	12
1120 (SUB)	2	50%	4
1130 (SEAL)		0%	1
1300 (AV)	2	22%	9
Totals	35	39%	90

Table 9. URL Billet 3110X Match Rate

Using a methodology similar to that used in Table (8), the FM-specific fill rate increases if the prerequisites are eased to include business-related subspecialties. Rising from 39 to 48 percent, this trend is shown in Table (10).

Billet Designator	31XX		Total URL
1000 (Any Officer)	19	56%	34
1050 (Any URL)	9	38%	24
1100 (Fleet Support)	6	100%	6
1110 (SWO)	4	33%	12
1120 (SUB)	2	50%	4
1130 (SEAL)		0%	1
1300 (AV)	3	33%	9
Totals	43	48%	90

Table 10. URL Billet 31XX Match Rate

However, as shown in Table (11), if 1000-coded and 1100-coded billets⁴ are removed from the grouping, the 3110X billet-to-officer match rate drops precipitously to 24 percent. Only one quarter of the billets that require operational expertise are filled with officers who have any FM qualification.

Billet Designator	3110X		Total URL
1050 (Any URL)	5	21%	24
1110 (SWO)	3	25%	12
1120 (SUB)	2	50%	4
1130 (SEAL)		0%	1
1300 (AV)	2	22%	9
Totals	12	24%	50

Table 11. URL-Only Billet 3110X Match Rate

Easing the prerequisite to any kind of business experience or education, the match rate increases as shown in Table (12).

⁴ 1000-coded billets can be filled by URL officers or any other type of Staff or RL officer. 1100-coded billets are filled by URL officers with no warfare designation.

Billet Designator	31XX		Total URL
1050 (Any URL)	9	38%	24
1110 (SWO)	4	33%	12
1120 (SUB)	2	50%	4
1130 (SEAL)		0%	1
1300 (AV)	3	33%	9
Totals	18	36%	50

Table 12. URL-Only Billet 31XX Match Rate

2. FM Officer Population

After determining the FM billet structure was only partially filled with qualified officers, I studied the available population of officers. Table (13) shows the available population of officers with any FM qualification. As shown below, the majority of officers have either experience or education but only 97 have both.⁵

Officer Subspec	Rank					Totals
	CAPT	CDR	LCDR	LT	LTJG	
3110P	51	113	119	62		345
3110Q	41	37	18	1		97
3110R	20	19	7	2		48
3110S	72	130	117	32		351
3111P			1			1
3111S		1	3	1		5
3110T*		8	20	45	5	78
Totals	184	308	285	143	5	925

* T suffix indicates that officer is in the process of earning an FM qualified degree

Table 13. Total Officer Population with an FM Qualification

Limiting the population to the URL communities, Table (14) shows the distribution of FM URL officers by rank and community.

⁵ P and T suffixes designate education codes. R and S designate experience codes. Q designates both education and experience.

URL Community	Rank					Totals
	CAPT	CDR	LCDR	LT	LTJG	
AV	34	56	25	7	1	123
SWO	39	53	33	53	1	179
SUB	22	18	13	12		65
FS	10	15	28	2		55
EOD (1140)		2				2
SEAL (1130)	1	5	2	2		10
Totals	106	149	101	76	2	434

Table 14. Distribution of URL FM Officers by Warfare Specialty and Rank

FM population distribution is compared to overall officer population and the FM billet structure in Table (15). As can be seen below, the submarine community is 15 percent of the FM community. Correspondingly, the submarine community fills 14 percent of the FM billets. When compared to the submarine community's proportion of the URL officer population (14 percent), it appears that the submarine community has closely matched their qualified personnel to their portion of the FM community. The Surface Warfare community has the largest percentage (41 percent) of FM officers, but should only fill 34 percent of the billets. In addition to the SWO community, the proportion of FM qualified Fleet Support (FS) officers is higher than the proportion of FS FM billets. This overage could compensate slightly for the relative shortage of FM qualified aviators.

URL Community	Comparison		
	People		Jobs
	% of FM Qualified Officers	% of URL Officers Navy-wide	% of FM Billets*
AV	28%	50%	41%
SWO	41%	31%	34%
SUB	15%	14%	14%
FS	13%	1%	9%
EOD (1140)	0%	2%	0%
SEAL (1130)	2%	1%	2%
Totals	100%	100%	100%

* Billets that can be filled by multiple types of officers are distributed in proportion to total officer population

Table 15. Warfare Community Population and Billet Comparison

3. Matching Talent to Jobs

As discussed in a previous chapter, the sub-process of distribution matches qualified officers to billets. In its most simplistic form, this process requires NPC to match a population of 434 FM URL officers to 90 FM billets as shown in Figure (13).

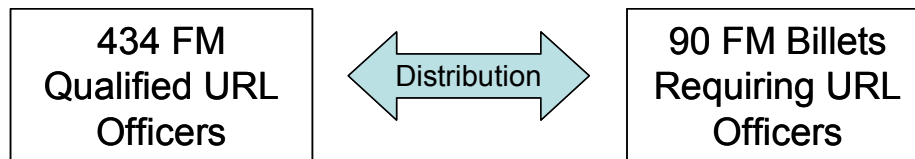


Figure 13. FM Distribution: Population to Billet Structure

Figure (13) is deceptively simple. Many of the complications to this process have already been discussed, but the most challenging one is officer career timing. To meet the requirements of their warfare communities, URL officers have limited opportunities to earn an FM education and gain FM experience. As shown in Table (15), the submarine community has closely matched its billet to population proportions while the aviation and SWO communities show deficits and overages accordingly. Figure (14) highlights the differences between the nominal career paths of SWO's and Aviators. Additionally, it highlights the main driver for this population to billet mismatch, a lack of shore tour opportunities.

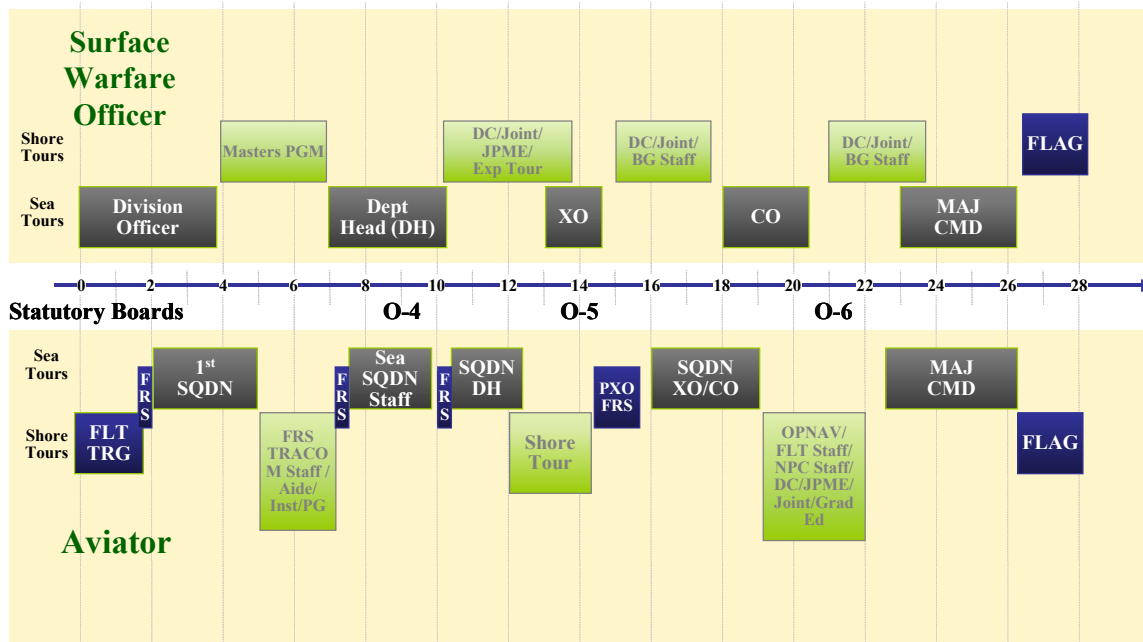


Figure 14. Nominal SWO and Aviator Career Paths [After Ref. 32]

The simplistic distribution challenge shown in Figure (13) is complicated by availability and timing. Blocks in “Shore Tour” rows shown in Figure (14) are the only times that URL officers can earn an FM education or gain FM experience. Comparing aviators to SWO’s, the number of sea tours remains the same. However, aviators have one fewer shore tour opportunity than SWO’s. Mostly due to early training requirements, this reduction in opportunity decreases the FM qualification rates of aviation officers.

C. HISTORICAL COMPARISON

As evidenced above, the FM community has significant challenges in creating qualified officers and matching them to the billet structure. As the closed labor pool of officers ebbs and flows over time, the FM billet structure changes to meet constantly shifting fleet requirements. Utilizing the data presented in the Palmer thesis, Figure (15) compares the 1992 FM billet structure to its status in 2004. [Ref. 8] Bar columns show the structure arranged by billet prerequisite. Overall, the total number of FM subspecialty coded jobs in the Navy decreased from 432 in 1992 to 409 in 2004.

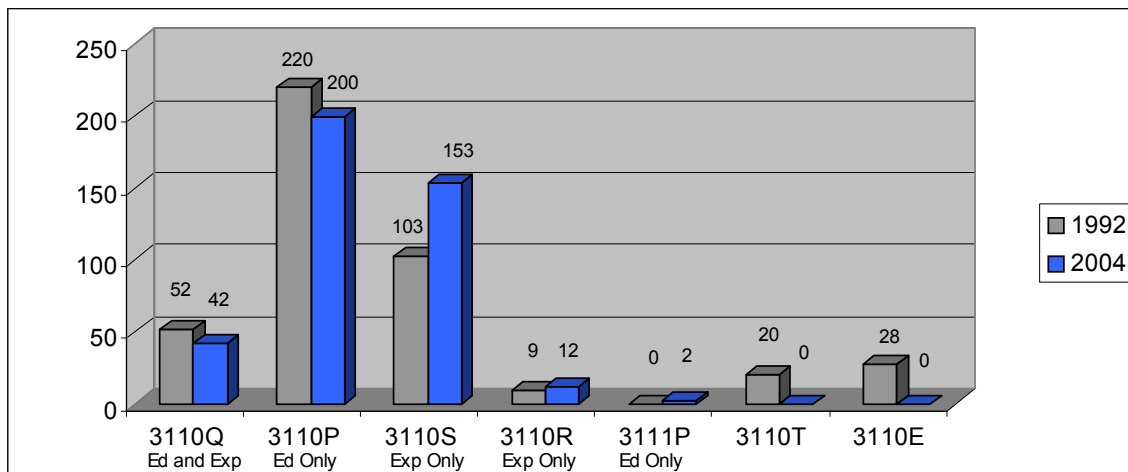


Figure 15. Historical Billet Structure (1992 vs. 2004) [From Ref. 8]

Over the 12-year period, billets were shifted from those requiring education to those requiring experience only. As shown above, 3110Q and 3110P billets decreased while 3110S billets increased over the 12-year span. Additionally, two billet prerequisite codes existed in 1992 that were removed by 2004. These were billets coded T and E.⁶ They may be categorized as apprentice-type billets. Their removal created a dilemma within the system. The only way to earn an FM (3110) experience subspecialty was to fill an FM billet, but doing so created a situation where an unqualified officer was accepted to fill that FM billet.

Removal of the T and E coded billets eliminated the stair-step process used to teach officers FM applications and allow them to gain FM experience. The complexity of the managerial control system has created a dysfunctional output. The combination of three parallel control systems (promotion, assignment and education) constrained by career timing has produced a system that was destined for underachievement. This is the problem facing the FM community manager. FMB must determine a simplified process for tracking and controlling the outputs of this multipart control system.

⁶ In 1992, T-coded billets were referred to as subspecialty training billets with officers expected to perform budget cycle tasks under supervision. E-coded billets were similar to the Q-coded requirement of both education and experience, but education for an E-code was only to the Bachelor's degree level. [Ref. X]

D. NATURE OF MEASUREMENTS

While FMB's managerial goals may be broken down into various components, the underlying manpower goal is to have every FM position filled with a properly qualified officer. While the organization calculates many statistics, the community manager uses two critical performance variables to evaluate its effectiveness.

- Number of FM qualified officers at each of the qualification levels.
- Percentage of positions filled with an appropriately qualified officer.

However, simply measuring an outcome and not acting upon variances limits the learning of an organization. [Ref. 14] Without feedback, an organization cannot adapt to meet its strategic goal. The nature of the two measures used by the FM community manager to monitor the system is shown in Figure (16).

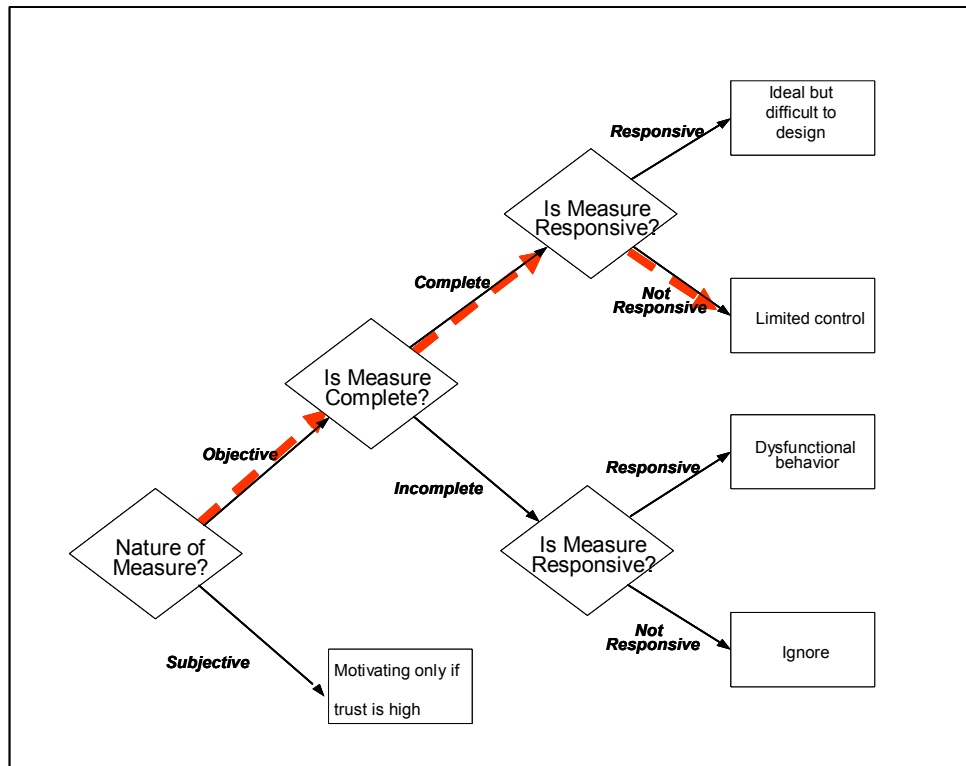


Figure 16. Nature of Measures Model [After Ref. 14]

Independently calculated and verified, the measures are quantitative and objective. They are extracted out of the Navy's manpower system and collated for FMB's periodic community report. The two identified variables reflect all the relevant status attributes of the FM officer community. The output of the multiyear process to create an FM qualified officer combined with the NPC assignment process is completely captured by these two variables. However, the variables monitored are not responsive. Depending on the actions of NPC and NPS, FMB cannot directly influence the outcome of these variables.

While objective and complete as shown in Figure (16), FM community manager control of these variables is limited. This lack of control lies at the core of the management control dilemma.

E. CONTROL ENVIRONMENT

FMB, responsible for the assignment and training of 409 financial managers in 219 different commands throughout the Navy, sets the control environment tone for the entire FM community. The Navy Personnel Command (NPC) in Millington, Tennessee executes the human resources procedures to match the best-qualified and available officers to each of these positions.

The inherent integrity and ethical values of Naval Officers are extremely high. Accustomed to structure and discipline, Naval Officers are devoted to the organization and attempt to execute their responsibilities with competence. The most challenging aspect of FM positions is the core knowledge required to competently function as a financial manager or comptroller. Often, uneducated and inexperienced officers are placed in these challenging positions by NPC because no qualified officers are available. However, accepting an under-qualified officer from NPC lowers the perceived standard for that position. While a rigorous financial education is probably not critical to a majority of the daily dilemmas that the Navy Financial Manager faces, NPC nomination and acceptance of officers who lack formal qualification sends a negative message to the entire community.

NPC's pervasive lowering of standards affects the entire FM community. However, the Navy command that lowers its standard and accepts an under-qualified officer is just as detrimental. If the prerequisites for a position can be ignored, the organization's members begin to question and possibly ignore other aspects of internal control. [Ref. 30] As control deteriorates from within, the risk of control system failure increases. In addition to internal weaknesses, external factors can also pose risks for the managerial control system.

F. RISK ASSESSMENT

Within the Navy, change is a constant. New personnel are continually replacing others moving on to their next career assignment. Introduction of new technology and information systems is omnipresent. These changes combined with organizational model reengineering such as the Revolution in Military Affairs (RMA) and the current Force Transformation create an extremely risky environment.

1. Fleet Response Plan (FRP)

In 2004, uncertainty within the Navy is at a peak. After weathering a decade-long force drawdown in the 1990's, the Navy must aggressively pursue cost efficiency to recapitalize its aging fleet of ships, submarines and aircraft. One component of this efficiency initiative is the Fleet Response Plan. Since the end of the Cold War, Navy units had been operating on a very predictable time cycle. Carrier Battle groups would train for 18 months then deploy for six. Deployment location varied with world events, but the cycle itself did not change except during time of war.⁷ In the first few years of the 21st century, the Global War on Terrorism forced military units to break from this cycle and become a more flexible and responsive force.

Typically, operational readiness would increase over the 18-month training period until it peaked just before a unit's planned deployment. Upon return from deployment, the unit's readiness was allowed to drop off precipitously because the next deployment

⁷ Operation Desert Storm in 1992 and Operations Enduring Freedom and Iraqi Freedom in 2001-TBD.

was 18 months in the future. The Global War on Terrorism demonstrated the lack of planned surge capacity associated with this cycle. If more units were needed before they were ready, large amounts of resources were required to execute the deployment. In 2004, Naval leadership and operational planners were developing a process to normalize the peaks and valleys of fleet readiness. As shown in Figure (17), unit readiness will be kept at a higher level throughout the training period and the ultimate readiness peak will be reduced.

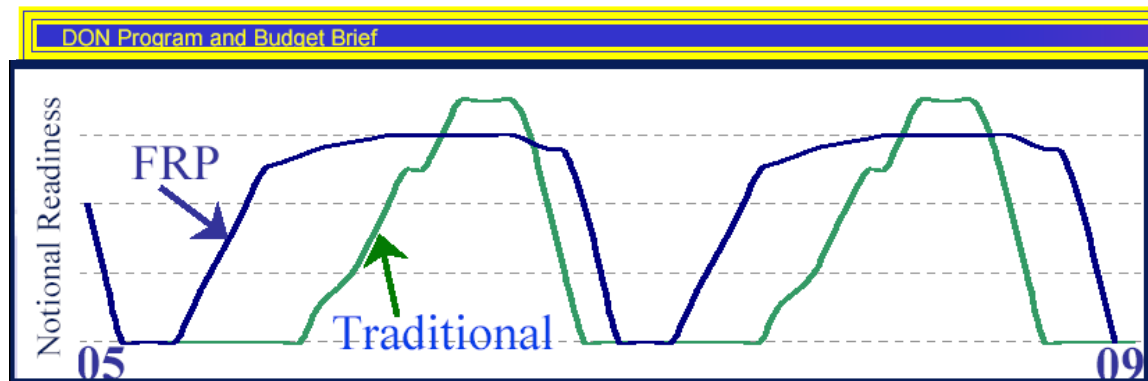


Figure 17. Fleet Response Plan (FRP) Future Concept [From Ref. 32]

The cost efficiencies are expected to come from the fact that units would not deploy until needed by the National Command Authority (NCA). While this plan creates the potential for cost savings, it significantly increases operational risk for Navy budget planners. With a predictable cycle, budget officers could predict future Operations and Maintenance (O&M) expenditures with relative accuracy. With the Fleet Response Plan (FRP), implementation of this task becomes more daunting. If the Navy were a manufacturing business, one alternative to demand uncertainty would be the creation of safety stock. However, the Congressional appropriation process prevents the establishment of an O&M equivalent to safety stock.

In 2004 and beyond, professional risk will increase for the FM community. When failure is defined as not budgeting the proper amount for operations, it is inescapable that failure will become more prevalent. To help manage this increased risk, FMB must ensure qualified officers are properly placed in FM community jobs.

2. Organizational Risk

NPC's practice of filling the Navy's FM officer positions with personnel who are under-qualified introduces significant strategic risk to the organization. Also defined as an operational risk, it is a breakdown in the established core assignment sub-process. Continued lack of control of the FM community manager's two critical measurements could ultimately result in franchise risk for the U.S. Navy. Such a situation occurred in 1995.

The General Accounting Office (GAO) testified that it had discovered "substantial misstatements in almost all of the Navy's major accounts and \$225 billion in errors in the Navy's fiscal year 1994 financial reports. These problems are caused by a complex set of processes and system issues, and to some extent by the Navy's personnel practices." [Ref. 6] The GAO study was initiated after the Navy was charged with multiple Anti-Deficiency Act (ADA) violations. The consequence of this excessive operational risk was that Congressional confidence was lost in the Navy's ability to manage its finances. Rising to the level of franchise risk, improper management of the Navy's (FM) community tarnished its image and reduced its credibility within the DoD budget process.

The 1997 GAO report conducted a calculation similar to one of the system's critical performance variables, the percent of qualified officers in FM billets. Concentrating on major comptroller billets, the report found a qualification rate of 60 percent for major comptroller positions in 1997. April 2004 data showed a 15 to 48 percent qualification rate⁸ depending on the criteria used. [Ref. 6] While the comparison is inexact, it is obvious that the problems identified in the GAO study have not been solved for the Navy's FM community over the last seven years. In 1997, the Navy faced a relatively stable environment. This has changed dramatically. Placing competent FM professionals into these critical billets could help meet both new and existing challenges and significantly reduce the Navy's organizational risk.

⁸ Tables (8) and (9).

G. COMMUNICATION AND INFORMATION FLOW

Information and communication associated with this control system concerns the placement of personnel, a human capital transaction. Feedback communication to both NPC and the Naval Postgraduate School enable those organizations to make corrective action based on managerial desires. FM community expectations are clearly communicated to each outside organization, however the FM community is but one stakeholder among many in the context of the entire Navy. FMB is the curriculum sponsor for the FM (837) program at NPS. In addition to ensuring that the NPS MBA program prepares future FM community officers for their duties as budget officers and comptrollers, FMB must also monitor the quantity and designator mix of officers receiving FM degrees. This is required to ensure that critical FM jobs can be filled with officers who have both the proper education and the required experience. These two relationships and the flow of information are shown in Figure (18).

Information and communication flow is very well established in this internal control system. Control begins to deteriorate when action is not taken on managerial feedback and the priorities of other stakeholders override the needs of the FM community.

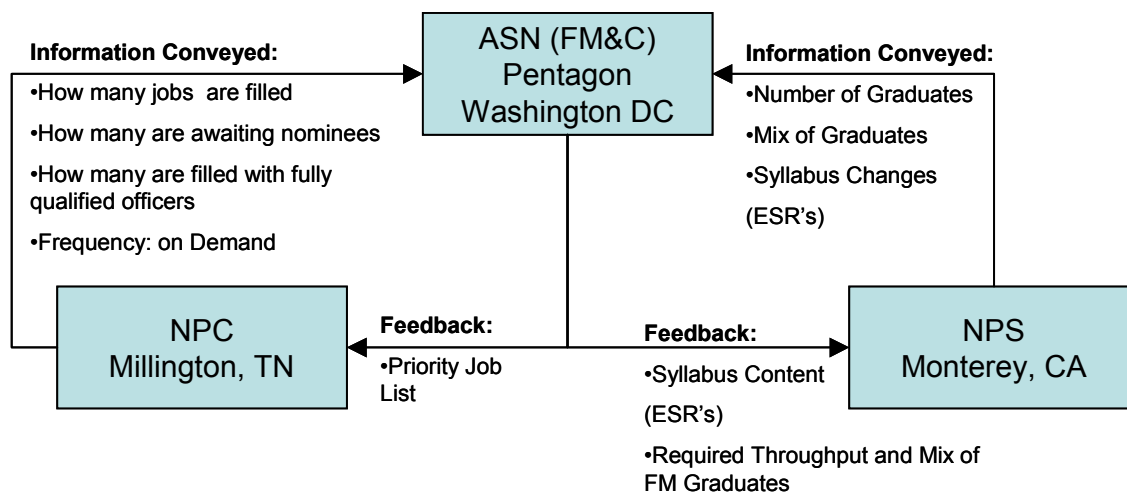


Figure 18. FM Stakeholder Communication Paths

H. MANAGERIAL CONTROL WEAKNESSES

FMB is responsible for the 409 financial management positions distributed throughout the Navy. In order to meet the goal of effectively managing financial activities within the Department of the Navy, FMB should ideally have every FM position filled with a properly qualified officer.

1. Managerial Control Weakness #1

While ideal, a 100 percent goal is very optimistic considering that historical billet-to-officer qualification levels fall well short of that. A 100 percent personnel placement goal is currently and historically unachievable. Achievable short-term targets are not identified. Goals and targets are not associated with time frames to gauge progress. Unachievable goals can actually reduce the motivation level of the organization's employees. Additionally, overly optimistic goals that are historically unreachable have limited positive organizational impact.

- Weakness #1: The personnel placement goal is currently and historically unachievable. Achievable short-term targets are not identified. Goals and target are not associated with time frames to gauge progress.

2. Managerial Control Weakness #2

By setting a clear strategic goal, this formal information system allows FMB to concentrate attention on the functions of the Budget Office and apply only the time needed to receive periodic updates on FM community status. Two critical data points are included in this report; the number of FM qualified officers and the percent of positions filled by a qualified officer. Simply measuring an outcome and not acting upon variances limits the learning of an organization. Without feedback, an organization cannot adapt to meet the strategic goal.

- Weakness #2: Performance Variances are not calculated. Variance information is not used as feedback.

3. Managerial Control Weakness #3

As has been discussed, this complex process takes many years to create a fully qualified FM officer. Additionally, during this FM qualification period the officer is not doing his or her primary function in the Navy. For line officers, this is either flying aircraft or driving ships and submarines. Time away from primary responsibilities in the Navy can put that officer's promotion probability at risk. If an officer is a Surface Warfare expert, he or she is rewarded for jobs such as teaching new Surface Warriors or working on a staff that directly supports fleet operations. Receiving an MBA at NPS or working in the Pentagon Budget Office is viewed by some as a lesser assignment. The reason this problem emerges is that an organization's incentives directly affect its employee behavior. Without a well-designed match between incentives and strategic goal, unintended consequences can occur

- Weakness #3: Incentives to become FM qualified are not aligned with the strategic goal.

4. Managerial Control Weakness #4

Setting a goal in advance and measuring the outputs only partially accomplishes the requirements of an effective diagnostic control system. The nature of the two measures used by the FM community manager to achieve his goal is shown in Figure (16). Independently calculated and verified, the measures are objective and reflect all the relevant status attributes of the FM officer community. The output of the FM qualification process is captured by these two variables. However, the variables monitored are not responsive. Dependent on the actions of NPC and NPS, the FM community manager cannot directly influence the outcome of these variables. As a customer of the promotion, assignment and education processes, FMB has limited levers of influence to affect the system's output. In order to enable an organization to reach its strategic goals, the manager must have a lever by which to alter the system. With limited control, the manager becomes a victim of others actions and must accept their results. Thus it is with FMB.

- Weakness #4: The FM Community manager has limited control of system outputs

I. SUMMARY OF MANAGERIAL CONTROL WEAKNESSES

The FM community manager has identified two variables that are aligned with his organization's manpower goal. Despite this alignment, four distinct problems have been identified in the implementation of this managerial control system.

- The personnel placement goal is currently and historically unachievable. Achievable short-term targets are not identified. Goals and target are not associated with time frames to gauge progress.
- Performance Variances are not calculated. Variance information is not used as feedback.
- Incentives to become FM qualified are not aligned with strategic goal.
- The FM Community manager has limited control of system outputs.

With the weaknesses identified, analysis used to identify control levers will be applied in the next chapter to recommend control process improvements. More rigorous control will improve the situation, but control depends on the people implementing it. More importantly, too much control can have adverse effects on the desired outcome. Proper control combined with incentives is the most powerful option. The CNO needs business-smart warriors who can make the right decisions when dealing with constrained resources. Adjustments to both control and incentives will enable the FM community manager to meet the CNO's requirements.

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VI. RECOMMENDATIONS AND SUMMARY

A. INTRODUCTION

And I've come to believe over time that we have not been as disciplined and as rigorous in our approach to manpower as we probably should have been. [Ref. 28]

The Chief of Naval Operation's assessment of overall control is supported by the analysis in this thesis. The process to build line officers into financial managers is complex and challenging. After examination of the promotion, assignment and education process components, it is evident that many different organizations are responsible for each step of control implementation. As Admiral Clark implies above, the first step in improving the process is the proper application of rigor and discipline to the control system.

1. Control System Weaknesses

Initiating solutions to the four identified control system weaknesses will allow the FM community manager to realize his strategic goals while also supporting the financial management components of the Navy's overall strategy. Additionally, proper implementation of these corrections will reduce the Navy's exposure to operational and franchise risk. Previous analysis identified the following four weaknesses.

- The personnel placement goal is currently and historically unachievable. Achievable short-term targets are not identified. Goals and target are not associated with time frames to gauge progress.
- Performance Variances are not calculated. Variance information is not used as feedback.
- Incentives to become FM qualified are not aligned with strategic goal.
- The FM Community manager has limited control of system outputs.

2. Control System Solutions

The solutions to the identified problems can be classified by the expected time to initiate. The first and second weaknesses are easily solved in the near term. The

remaining two will require more time to implement. By identifying potential solutions to the weaknesses, a logical order emerges.

- Step 1: Develop a schedule of time-based FM officer placement goals.
- Step 2: Calculate variances from established goals and provide feedback to NPC.
- Step 3: Insert a control input into the NPC assignment process.
- Step 4: Align incentives to desired strategic outcome.

Two distinct methods could be used to implement the above recommendations: control implementation and incentive alignment. While each method alone could solve the managerial problem, a combination of the two would provide the most comprehensive solution. First, the implementation of more rigorous control is examined.

B. RECOMMENDATION DETAILS

While Steps 1 and 2 could be sufficient to solve the FM qualification problem, history has shown that NPC will not significantly change their practices without Step 3, the insertion of a control input into the process. Ultimately, the alignment of incentives, Step 4, should allow reduction of FMB control of the NPC assignment process. Only after reaching the goals established in Step 1, can control reduction be considered. If the above control system modifications are implemented, the newly established goals and processes could not only improve the FM community, but also ease the transition that occurs when the Budget Officer position changes. An analysis of the required data and system alterations is provided for each step in the solution process.

1. Step 1: Develop a Schedule of Time-Based FM Officer Placement Goals

The data required to begin this solution are the establishment of placement percentage goals and an associated timeline. Assuming a three-year tour of duty, approximately 136 of the 409 FM positions will rotate every year. As shown in Table

(8), 62 positions are currently occupied by fully qualified officers. This is a current full qualification rate of 15 percent. By replacing all 136 rotating officers with fully qualified candidates, the qualification rate would increase to 48 percent. This is the upper limit of the initial control goal. Additionally, URL officers often rotate at intervals shorter than every three years. This faster rotation opens additional opportunities to fill FM billets with qualified candidates. This rotation should be diligently monitored to maximize the qualification rate.

Officers are assigned a Projected Rotation Date (PRD). Analysis of the PRD in combination with qualification status will allow the FM community to calculate reasonable qualification goals for NPC. Setting an aggressive initial goal (50 to 70 percent) for future nominee qualification levels and increasing this goal in subsequent years will incrementally improve the qualification rate of the FM community. Alternatively, the Priority Job List shown as feedback in Figure (18) could be expanded to include less critical, but important positions. By demanding a 100 percent qualification rate for the smaller community subset defined by the Priority Job List, the goal becomes more attainable. Prioritizing the list of 409 billets gives FMB managerial guidance to the NPC-owned assignment process.

The strength of this solution is in its simplicity. Currently, no formal goals exist. A plan to improve is the first step in the process. Establishment of reasonable and attainable performance goals will sustain NPC's motivation to achieve them. The weakness of this solution is that FMB has only a limited lever of control to encourage NPC's achievement of the goals.

2. Step 2: Calculate Variances from Established Goals and Provide Feedback to NPC

Once the performance goals and an associated timeline are established, the ability to calculate variances is in place. This solution provides an additional feedback component to the assignment cybernetic model shown in Figure (5). With persistent FM community feedback, NPC's FM placement goals should remain high among other competing priorities. This visibility should incrementally improve the qualification rate of the FM community.

The strength of this solution is the establishment of permanent managerial attention. Reasonable goals combined with accurate variance feedback will align FMB's manpower goals with the outputs of the NPC assignment process. The primary weakness of this solution is that NPC balances the many competing priorities for officer skill mix within the Navy. If NPC continues to place a lower priority on the FM community, managers can do little to alter system outputs or the process itself.

3. Step 3: Insert a Control Input into the PERSCOM Detailing Process

The FM community manager has limited control over the system's internal processes and external controls. The first recommended control alteration is the establishment of an approval process. Many high visibility officer positions such as White House and Joint Staff duty require NPC to send a nomination to the staff. Only after the staff accepts the officer is the Navy allowed to release the officer's orders. The FM community manager already requires nominations for critical Pentagon FM billets and fleet comptrollers. To increase control, FMB could request that NPC submit all or a prioritized subset of FM nominees to his Pentagon office for approval. While this initiative will control the qualification rate of the system's output, it would not completely solve the problem.

As shown in Chapter V, sufficient numbers of qualified officers exist within the system to fill all FM billets. However, the combination of career timing and competing priorities prevent NPC from assigning many of these qualified officers to FM billets. Inserting an FM community proponent into the NPC assignment process would greatly increase FMB's assignment control lever. Such situations already exist within NPC. Acquisition and Joint community managers are inserted as proponents for external stakeholders. Inserting a control into the system would allow the FM community to alter the system's output and reach its strategic goal.

The primary strength of this solution is increased managerial control over the system's output and process. Offsetting this strength are significant weaknesses. Sending FM officer nominations to the Pentagon would delay the assignment process and increase the administrative workload of the staff. Adding an FM officer to the NPC staff

would cost money and would not support recent mandated headquarters staff reduction initiatives. Additionally, an FM community manager at NPC would set a new precedent. Joint and Acquisition managers are responsible for compliance with regulations external to the Navy. An FM community manager's interface with stakeholders would be entirely within the Navy. This would seem to argue for nominee submission to FMB as described above.

Implementation of these first three steps would improve managerial control and shift the FM community manager's ability to influence to a higher state as earlier assessed in Figure (12). However, the most powerful combination available to the manager is a merging of control and incentives.

4. Step 4: Align Incentives to Desired Strategic Outcome

Promotion and monetary incentives are significant motivators within the military ranks. As discussed in Chapter III, explicit language in promotion board precepts could increase the promotion rate of FM qualified officers. As the sole promotion lever of control accessible by the FM community manager, FM drafted inputs to the board precept should reflect the Navy's desire to promote business savvy officers. Combining the possibility for better promotion with monetary incentives would create a significant demand for FM qualification.

Among the 70 different compensation methods available to military planners, pay and entitlements are widely recognized as the most powerful force-shaping tools. [Ref. 33] Table (16) shows the numerous incentive and special pay line items in the Navy's budget.

Incentive and Hazardous Duty Pay	Special Pays
A. Flying Duty Pay	A. Medical Pay
1. Aviation Career, Officers	B. Dental Pay
2. Crew Members	C. Optometrists Pay
3. Noncrew Member	D. Veterinarians
4. Aviation Continuation Pay	E. Board Certified Pay for Non-Physician Health
5. Career Enlisted Flyer Pay	F. Nurses Pay
B. Submarine Duty Pay	G. Nuclear Officer Incentive Pay
C. Submarine Support Incentive Pay	H. Nuclear Accession Bonus
D. Parachute Jumping Pay	I. Scientific/Engineering Bonus
E. Demolition Pay	J. CEC Accession Bonus
F. Special Warfare Officer Pay	K. Responsibility Pay
G. Surface Warfare Officer Continuation Pay	L. Sea and Foreign Duty
H. Other Pays	M. Diving Duty Pay
	N. Foreign Language Proficiency Pay
	O. Hostile Fire Pay
	P. Hardship Duty Pay
	Q. Judge Advocate Continuation Pay
	R. Reenlistment Bonus
	S. Special Duty Assignment Pay
	T. Enlistment Bonus
	U. Education/Loan Repayment
	V. High Deployment Per Diem Allowance
	W. Other Special Pay

Table 16. Incentive and Special Pay Categories [After Ref. 34]

Of the incentives shown above, most reward hazardous duty or are designed to improve the retention of uniquely trained service members. For FY 2004, appropriated incentive and special pays were \$290 million and \$1.19 billion respectively. Together these two categories accounted for 6.25 percent of the Navy's \$23.8 billion military personnel appropriation. [Ref. 34] Navy leadership has decided that rewarding the skill sets shown in Table (16) is more important than rewarding business acumen. If the Navy is serious about building financial managers, it must not only better control their creation, but also reward them for their expertise.

An innovative approach to rewarding FM qualified officers to fill FM billets would be an expansion of the Assignment Incentive Pay (AIP) program. Currently limited to the enlisted ranks, this program rewards Sailors who volunteer for relatively undesirable jobs in Japan and Italy. While there are no plans for expansion into the officer ranks, there is "nothing in the legislation that prevents its expansion to officers." [Ref. 35]

The AIP program operates as a reverse auction. Qualified Sailors bid electronically for a bonus associated with these jobs. Starting at \$450 per month, the job is awarded to the best-qualified applicant with the lowest bid. [Ref. 35] This market-

based approach provides the lowest cost bonus level required to fill the position voluntarily. This model could be an ideal fit for the FM community. While currently limited to a maximum of \$1500 per month, the bonus could be used to reward FM officers who take challenging FM positions. [Ref. 35]

The FM community manager could set the bonus level and only those officers with the required level of education and experience would be qualified to apply. Combined with the promotion incentive, this reward-based structure would create a desire for officers to become FM qualified and ultimately fill FM positions. Both the quality and supply of FM officers would increase. [Ref. 36] If each of the 50 URL-only billets was rewarded at the \$1500 maximum bonus, the total would be \$900 thousand per year. However, this amount would be the absolute maximum. In all likelihood, officers would bid down those billets that are career enhancing or have other appealing aspects such as geographic location. The end result would be the minimum market cost to reward FM qualified officers for filling FM billets.

The strength of this solution is that FM officers are rewarded for seeking FM qualification and working in FM jobs. With proper incentive alignment, the number of officers seeking FM positions would increase. With this new demand, the FM community could increase selectivity when placing officers into FM billets. The biggest weakness is that bonuses cost money. Justification would have to be provided to Navy leadership for both the monetary and promotion incentives.

Implementing the four-step solution outlined above would help solve the FM community's qualification problem and ultimately allow the FM community manager to mitigate franchise risk and reach his strategic goal; Effective Management of Financial Activities within the Department of the Navy.

C. SUMMARY

A review of the research questions presented in Chapter I follows.

- Research Question 1: What is the existing management/internal control system utilized to produce a senior unrestricted line officer with Financial Management training and experience?

As shown in Chapter III, the process to train and educate a line officer in the FM community is complex and challenging. The process itself has three main components: promotion, assignment and education.

- Research Question 2: What are the system's strengths and weaknesses?

As with any control system, proper design is a potential strength. Correspondingly, the system's greatest potential weakness is the people charged with implementation. For the FM community, the structure is robust; however, implementation could be improved.

- Research Question 3: What is the strategic manpower goal of the FM community?

In order to meet the Sea Enterprise component of the Navy's Sea Power 21 strategy, the FM community must strive to educate and train its members. The FM community's manpower goal is to ensure that experienced and educated officers are utilized in FM positions throughout the Navy. Control alterations to the assignment sub-process would allow this goal to be met.

- Research Question 4: How can the system be improved to align with the desired strategic goal?

A combination of better control implementation and tailored incentives would align the FM qualification process to support overall Navy strategy. As previously

demonstrated, the CNO needs business-smart warriors who can make the right decisions when dealing with constrained resources. URL FM officers, managed by FMB, provide core business acumen to the United States Navy. Every opportunity should be taken to educate, promote and assign these officers to positions where they can hone their business skills. Ultimately, the CNO will have a cadre of officers with the skill sets he requires to meet the Sea Enterprise component of Sea Power 21.

D. POTENTIAL FOR FURTHER RESEARCH

During the examination of the complex FM qualification process, other paths emerged for further analysis. The recommendations in this thesis are constrained by scope limitation. Concentrating on existing processes and programs, the solutions presented are relatively near-term. Examining the two paths presented below could suggest longer-term solutions for the FM community.

- Analyze the feasibility of a FM community structure that follows the Acquisition Professional (AP) model.
- Compare and contrast the FM communities of the different services to determine potential improvements in the Navy's officer FM qualification process.

Additionally, the creation of an Executive MBA course has further complicated the FM community utilization problem. After earning a 3100 subspecialty code in general resource allocation, these officers could potentially fill FM billets. Further research could analyze the effect of these officers joining the 31XX family of subspecialties.

- With the first NPS sponsored Executive MBA (EMBA) course graduating in July 2004, utilization of these officers could be compared to existing FM officer utilization. While their education falls short of the FMB-dictated Educational Skill Requirements (ESR's) of the resident MBA program, performance of these officers could be compared to those having met the requirements for the FM (3110) subspecialty.

Ultimately, the FM community's success could be used as an organization-wide model to improve the education and experience components of officer professional development.

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